

AGRICULTURAL OUTLOOK

Economic Research Service
United States Department of Agriculture

• November 1991

**Central Europe
Economies in
Transition**

AGRICULTURAL OUTLOOK



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News of Agriculture in Central Europe, EC Reforms, Wetlands Definition, and Federal Crop Insurance

In a two-part series beginning this month, *Agricultural Outlook* looks at the transition to market-oriented agriculture in the seven countries that make up the region of Central and Eastern Europe. The changes in these countries are remarkable not only for their scope, but also because few guideposts exist on transforming an economy managed by planners into one driven by the market.

This month, part I provides a brief overview and outlook for the region and focuses on the problems, challenges, and prospects facing three countries in the forefront of change—Poland, Hungary, and Czechoslovakia.

Two years after the political and economic upheaval, some stability is returning to parts of the region. In place of the command system that emphasized planned production targets, with no adequate price mechanism, market forces are beginning to work. But although prospects for agricultural production in 1991 and 1992 appear favorable, farm profitability will continue to be squeezed.

Elsewhere on the international scene, EC agricultural policies are undergoing changes. A new 1-year EC set-aside program is designed to reduce area planted to grains and other crops for the 1992 harvest. And proposed reforms to the EC oilseed support regime are an attempt to address a U.S. complaint that EC policies discriminate against imported oilseeds.

The Soviet import situation continues to dominate the outlook for U.S. agricultural exports. In late September, USDA announced liberalized coverage for U.S. export credit guarantees remaining for fiscal 1991, which ended September 30. By late October, all of the fiscal 1991 credits and virtually all of the previously allocated fiscal 1992 credits were used.

Adverse weather this summer is likely to result in tighter U.S. supplies of feed



grains in 1991/92. With lower production, ending stocks of feed grains are likely to drop to 38 million metric tons—the lowest since 1976/77.

Given tighter world stocks of feed grains expected in 1991/92, USDA Secretary Madigan announced a preliminary 5-percent acreage reduction program (ARP) on September 30 for 1992 crops of corn, grain sorghum, and barley, down from 7.5 percent in 1991. The preliminary ARP would be the lowest for these crops since 1981.

With this ARP level, U.S. corn supplies in 1992/93 would rebound, based on past program participation and planting decisions and assuming normal weather. However, a repeat of 1991's dry weather would push corn supplies below this year's 9 billion bushels.

For some farmers, crop insurance is an important mechanism to deal with yield losses that result from a wide range of causes—such as this year's drought in the Corn Belt and heavy rains in the Delta. However, the Federal crop in-

surance program has been plagued by high government costs and what many perceive as low farmer participation. *AO* examines these issues and an alternative type of program based on area losses.

Wetlands are in the news again, as the Environmental Protection Agency extends the public comment period on proposed revisions to the Federal wetlands manual, first announced in August. The changes would restrict the definition of wetlands and exclude some agricultural land.

Redefining wetlands would affect farmers through the impact on two programs: the Swampbuster provision, which denies USDA program benefits to farmers who convert wetlands for crop production, and Section 404 of the Federal Water Pollution Control Act amendments, which governs permits for dredging and filling wetlands.

California orange production is beginning to recover from the 1990 freeze, but output in Florida will be below last year. Although U.S. supplies will be larger, fresh orange prices are expected to remain relatively strong this season, because quality will be higher. And a severe infestation of whitefly is likely to cut winter supplies of lettuce, fresh broccoli, and cauliflower, leading to higher prices.

News of adverse weather and deteriorating crop conditions in the Corn Belt over the summer led to expectations of a slowing in hog herd expansion. But as yet, declining hog prices and lower grain supplies have not discouraged hog producers from expanding production. Larger inventories and increases in farrowing intentions actually raise production estimates for 1992 to a record.

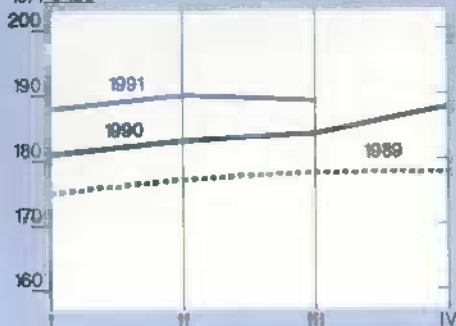
Consumers will find plenty of turkey, as well as other meats, available for the holiday season, with retail prices for turkey and other poultry lower than a year ago.

Commodity Overview

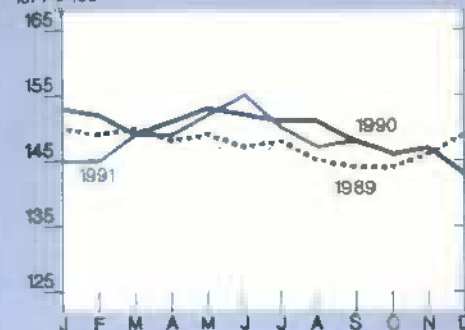
Prime Indicators

Index of prices paid by farmers

1977 = 100

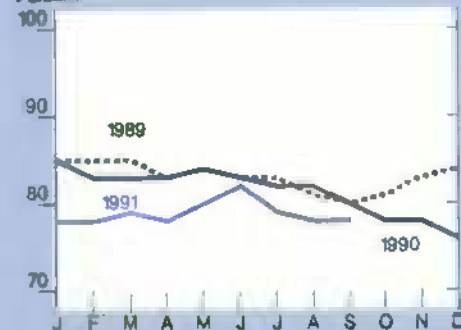
Index of prices received by farmers¹

1977 = 100

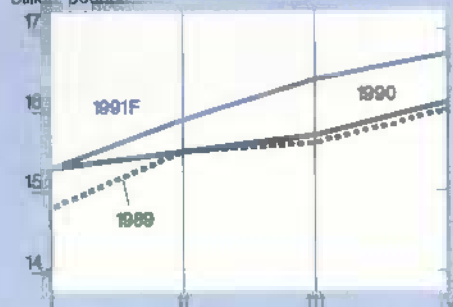


Ratio of prices received/prices paid

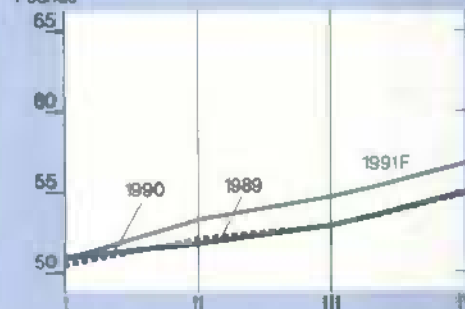
Percent

Total red meat & poultry production²

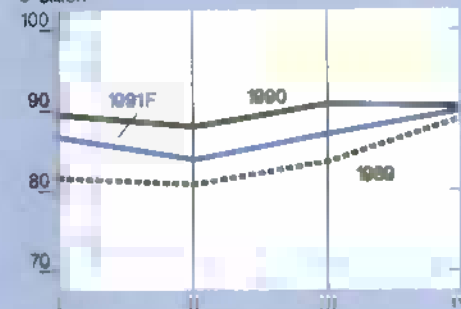
Billion pounds

Red meat & poultry consumption, per capita^{2,3}

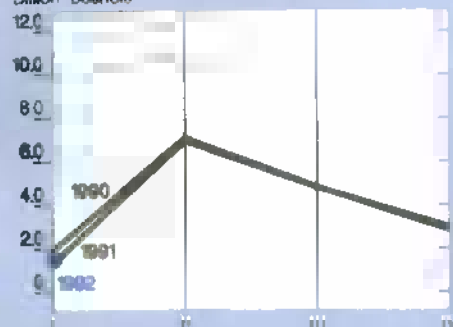
Pounds

Cash receipts from livestock & products⁴

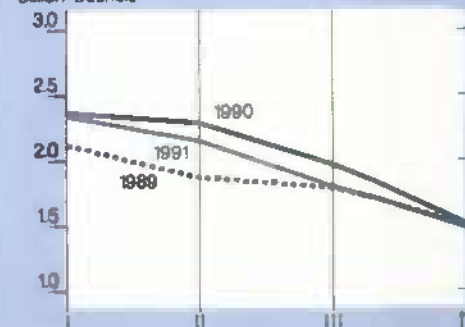
\$ billion

Corn beginning stocks⁵

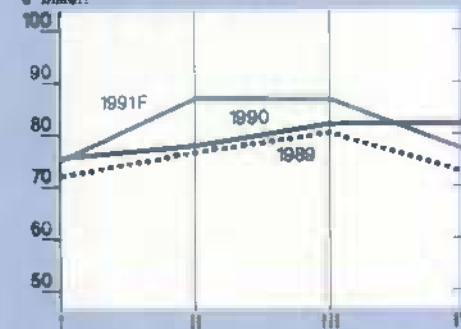
Billion bushels

Corn disappearance⁵

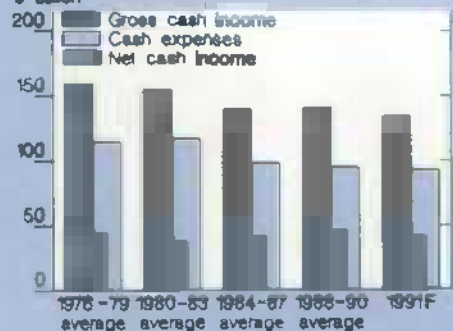
Billion bushels

Cash receipts from crops⁴

\$ billion

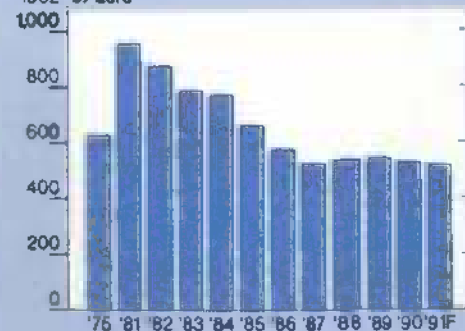
Real cash income⁶

\$ billion



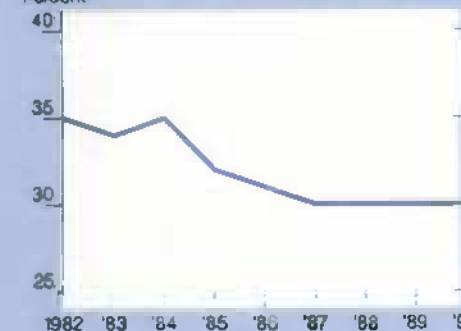
Average real value of farm real estate

1982 \$/acre

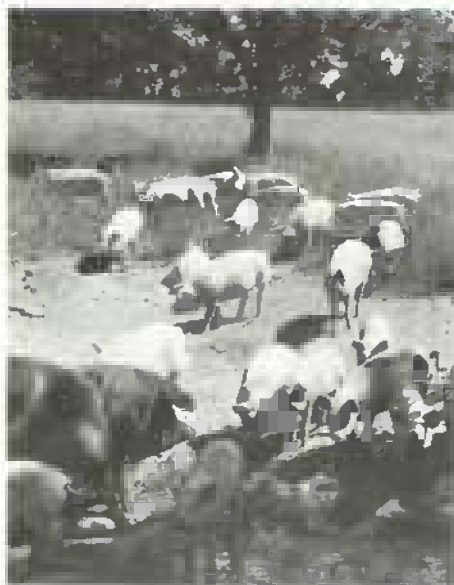


Farm value/retail food costs

Percent



¹For all farm products. ²Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. ³Retail weight. ⁴Seasonally adjusted annual rate. ⁵I=Sept.-Nov.; II=Dec.-Feb.; III=Mar.-May; IV=June-Aug. Marketing years ending with year indicated. ⁶1982 = base year.



Livestock, Dairy & Poultry Overview

As of September 1, lower grain supplies and declining hog prices have not discouraged hog producers from expanding production. Following adverse weather in the Corn Belt and deteriorating crop conditions over the summer, AO reported the possibility that hog herd expansion would slow. But larger inventories and increases in farrowing intentions raise production estimates for 1992 to a record 17.2 billion pounds.

Net placements of cattle on feed during August were down a sharp 17 percent from a year earlier. Feedlot operators cut back on placements in the face of large losses on fed cattle marketed, ample forage availability, continuing high prices for feeder cattle, and higher feed costs.

Consumers will find plenty of turkey available for the holiday season, from Thanksgiving through the new year, with retail prices lower than a year ago. Lower broiler prices are also expected this fall as poultry and red meat supplies continue to increase. (For the latest estimates for the livestock, dairy, and poultry markets, see tables 10-16.)

Continued Expansion In U.S. Hog Herd

Nearly 2 years of positive returns for hog producers have evidently offset this summer's dry weather and expectations for higher feed prices. All indicators point to record pork production in 1992, of 17.2 billion pounds. The September *Hogs and Pigs* report showed farrowing intentions in the next two quarters up 7 and 8 percent from a year earlier, and a 7-percent expansion in the breeding inventory. A 6-percent increase in total hog and market hog inventories suggests short-term supplies will continue to run far ahead of last year.

The level of breeding stock and likely marketable hogs are signposts to production increases through next summer. Increased hog marketings and heavier weights on average will raise fourth-quarter 1991 production 6 percent from a year ago. With expectations for plenty of relatively low-priced pork available in the coming months, no sizable additions to frozen stocks seem likely. Evidence of continued expansion supports this observation as well as projections for record 1992 pork production.

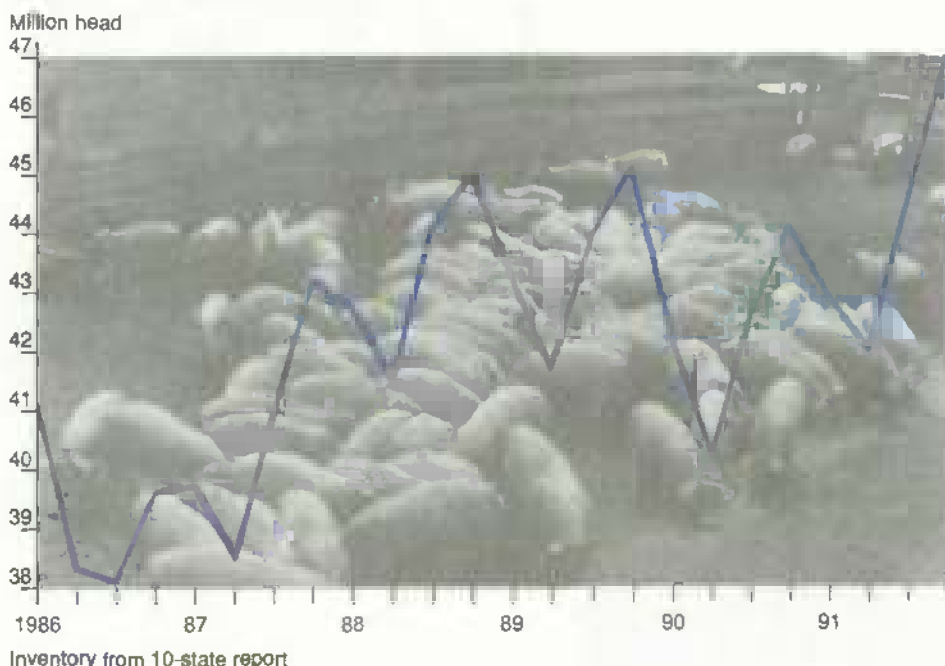
In spite of a third consecutive month of increased marketings, hog prices remained steady through September and much of October at \$44-\$46 per cwt. Producers' returns remain positive, but continue lower than earlier this year. Over 80 percent of the decline was due to lower hog prices; the rest resulted from higher feed costs. Producers continue to build herds, and it appears that prices will average below total costs but approach cash costs by late November or early December.

Third-quarter wholesale pork prices declined about 3 percent from the second quarter, with most of the decline occurring in September.

Retail pork prices dropped 3.5 cents per pound in August, enough to offset a rise in July. Retail prices fell another 2.3 cents in September. Still, third-quarter retail prices rose 1.4 cents over the previous quarter, reflecting seasonally wider marketing spreads. Prices should decline about 10 cents in the fourth quarter, as wholesale values drop and marketing spreads narrow.

Monthly price spreads have widened as farm prices decline more than retail prices. Consistently higher marketing

Hog Inventories Continue To Climb



Commodity Overview

spreads in 1991 are expected to put the year's average spread 5 to 7 percent higher than last year's \$1.25 per pound.

Fewer Cattle Placed on Feed

Net placements on feed during August were down sharply, 17 percent below a year earlier. Feedlot operators reduced placements in response to several factors—large losses from fed cattle marketed, continuing high prices for feeder cattle, and rising feed costs over late-spring levels.

In the seven monthly reporting states, the September cattle-on-feed inventory was virtually unchanged from last year's low level. Compared with the previous month, the September inventory represents an unusually large decline, given the high levels of cattle on feed reported in August. Marketings during August were 3 percent above a year ago. The inventory report was seen as positive for cattle prices, and also supports earlier expectations that cattle price lows for the year occurred in August.

Typically the largest placements during the year occur in September or October, but with forage conditions favorable in most areas, the seasonal expansion in cattle placed on feed will likely be less pronounced than usual this fall. For the last half of this year and early next year, cattle placed on feed are expected to be heavier than in the last 2 years, when poor grazing conditions forced many light-weight stocker cattle off wheat pastures.

For the year through August, placements have been about 8 percent below a year earlier, so with good forage conditions, heavier feeder cattle are available for placement. Cattle placed at heavier weights usually will reach market weight with fewer days on feed. A larger share of total inventory is likely to be marketed from fourth-quarter 1991 through second-quarter 1992.

Feedlot operators have failed to cover cash costs since June, with many operators losing over \$100 per head during August. The losses are mainly

attributed to record feeder cattle prices early in 1991, and a sharp decline in fed steer prices—from highs of over \$80 earlier in the year to the mid-\$60's in August.

Feedlots are not expected to cover costs for the remainder of this year and into early next year, given current forecasts for fed steer prices and the high costs of feeder cattle. Budgets estimated by ERS for Great Plains custom cattle feeding are projecting that breakeven prices of \$80 to \$83 per cwt are needed for fed steers from September 1991 through January 1992, well above current expected prices.

Farm-Retail Price Spreads Decline

Retail prices for Choice beef in September averaged \$2.80 per pound, 8 cents lower than July and slightly lower than a year earlier. Farm-retail spreads narrowed during September to \$1.33 per pound compared with \$1.40 in August, as live steer prices rose slightly and retail Choice beef prices continued to reflect earlier declines in live and wholesale prices.

In coming months, farm-retail spreads will continue to decline, as live cattle prices advance through fall, and exceed the rate of change anticipated for retail Choice beef prices. Retail prices are expected to rise to the upper \$2.80's per pound by yearend and remain in this range in 1992.

Plenty of Turkey for Thanksgiving

Consumers will find plenty of turkey available for Thanksgiving and other holidays, with retail prices expected slightly lower than in 1990. Retail price cutting is likely, given ample supplies of both pork and turkey. Per capita turkey consumption for the fourth quarter is expected to be around 6.5 pounds, up slightly from last year. This represents about 34 percent of the estimated annual consumption of just over 19 pounds in 1991, up from 18.4 pounds in 1990.

Turkey producers are cautious, reflected in estimates for fourth-quarter turkey production virtually unchanged from last year. This would be the first time since early 1989 that quarterly turkey production failed to rise above a year earlier.

For 1991 overall, production is likely to be up about 2 percent, the smallest annual increase since 1984. The year's unusually slow growth follows a sharp drop in wholesale prices at the end of last year when production jumped over 9 percent. Wholesale prices this year have averaged slightly below last year, resulting in losses or very low returns.

Low returns are expected to continue in the fourth quarter and contribute to another year of low growth in turkey production in 1992, at 2-4 percent. Rising feed costs this fall probably have lowered the expectations of higher returns in 1992.

Turkey Stocks Still High Despite Flat Production

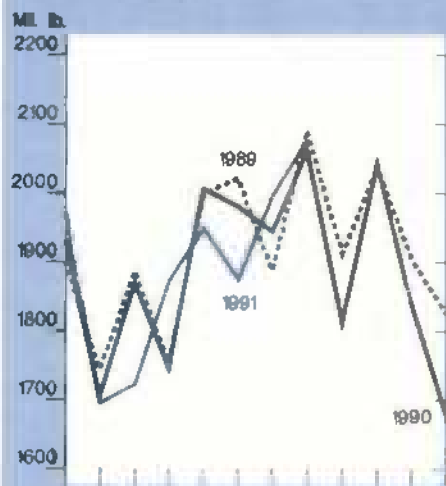
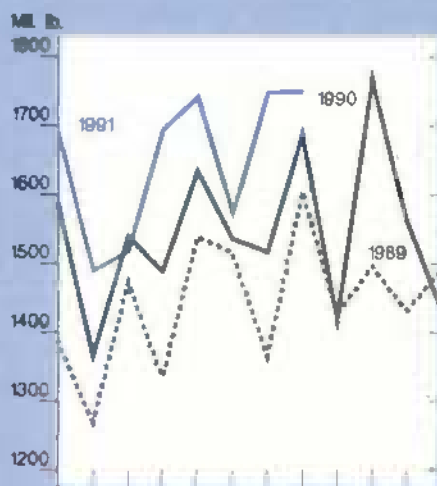
Turkey stocks remain at record highs, with 619 million pounds on September 1, about 4 percent above last year. A healthy increase in per capita consumption of 6-7 percent during the first half of 1991 helped temper the stock buildup, but continued growth in consumption will be necessary in the fourth quarter to pull stocks down below last year's level. Expected large supplies and lower retail prices for pork will limit gains in turkey consumption compared with last year, when red meat prices were higher.

Large stocks are pressuring wholesale turkey prices, and although prices rose seasonally in the third quarter, they averaged below year-earlier levels. Prices dropped in the first week of October, and Eastern region hen prices in the fourth quarter should average in the low- to mid-60's per pound, compared with 69 cents in fourth-quarter 1990. For the year overall, hens are expected to average 60-62 cents, compared with 63 last year.

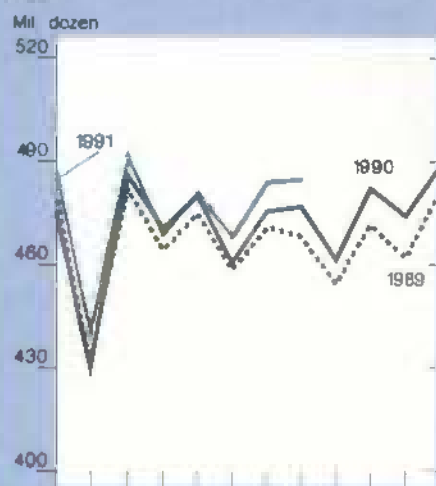
Livestock & Product Output

Commodity Overview

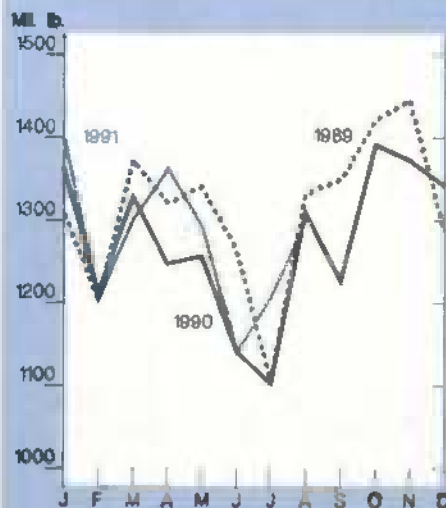
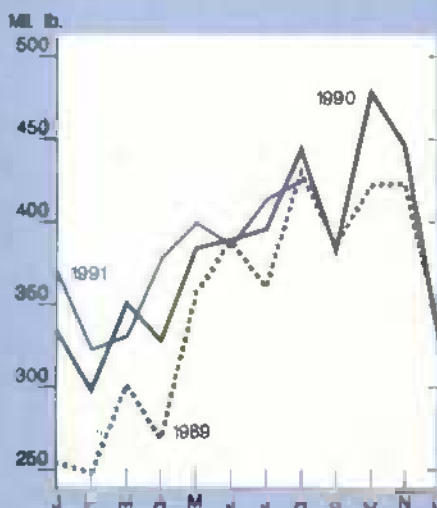
Commercial beef

Broilers¹

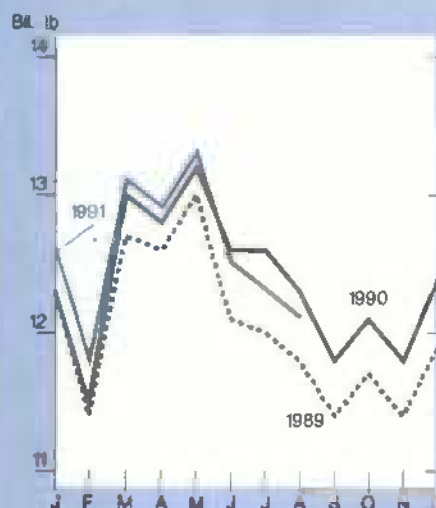
Eggs



Commercial pork

Turkeys¹

Milk



¹Federally inspected production, ready-to-cook.

Broiler Prices Weaker This Fall

Lower broiler prices are expected this fall as poultry and red meat supplies continue to increase. Wholesale broiler prices during the fourth quarter are likely to decline seasonally from 54 cents a pound in the third quarter to the high 40's, and remain about the same as last year.

Chick placements from July through October indicate that fourth-quarter broiler output will likely reach nearly 5 billion (ready-to-cook) pounds. This increase, about 4 percent from a year earlier, is only half the expansion rate of last fall

and reflects producer reactions to lower net returns throughout the year. Overall, 1991 output is expected at about 19.7 billion pounds, up over 6 percent from a year earlier.

Wholesale broiler prices continue to be affected by uncertainties surrounding exports. The extent to which domestic broiler prices will be sustained by exports this fall will depend largely on the level of additional credit guarantees allocated for USSR purchase of poultry meat. In September the USSR requested 220 million pounds of U.S. poultry meat through export credit guarantees, which most likely would be shipped over a 6-month period. On October 4, USDA approved a \$15-million credit for about 40

million pounds. If shipments are completed in fourth-quarter 1991, U.S. broiler exports could surpass last year's record.

Given current strength in other markets, and the earlier shipments to the USSR, broiler exports in 1991 are estimated at 1.12 billion pounds, slightly below last year. Through August, exports to all destinations were up about 1 percent from a year ago. And although sales to the USSR are currently running well behind last year, sales to Japan, Hong Kong, Mexico, the Middle East, and some smaller markets continue strong. Most sales to the Middle East are whole birds under the Export Enhancement Program (EEP). In 1991, EEP sales are expected

Commodity Overview

to represent about 6 percent of total broiler exports.

For 1992, the outlook for broilers reflects continued pressure from increased meat supplies and lower red meat prices. Broiler production will likely increase about 4 percent in 1992, and commercial red meat production probably will also be up 4 percent. About 5 percent more ready-to-cook broilers are expected in first-quarter 1992 compared with 1991. First-quarter wholesale prices for broilers are expected to average in the high 40's per pound, slightly below the average in first-quarter 1991.

Laying Flock & Egg Production Increase

The second-half table-egg flock continues to be larger than a year ago, a switch from the pattern in the first half of 1991. But fourth-quarter production is likely to be unchanged from last year, as producers respond to expected lower prices.

The table-egg flock on September 1 was 228.8 million, up 1 percent from a year ago, following increases in August and July. With larger flocks, table-egg production in the third quarter was 1-2 percent greater than last year.

Table-egg production for 1991 is estimated at 4.9 billion dozen, up fractionally from a year earlier. Total egg production will likely increase about 1 percent to 5.7 billion dozen, reflecting growth of about 4 percent in hatching-egg production.

The outlook for 1992 calls for table-egg production at or slightly below 1991, as producers adjust to higher feed costs and lower prices.

Egg Prices Below a Year Ago

Wholesale egg prices (New York average) are expected to be around 4 percent lower in 1991 than last year. Prices are expected to increase seasonally in the fourth quarter, ranging from the high

70's to low 80's per dozen, but remain considerably below last year's 88 cents.

Average retail prices in the fourth quarter are expected in the mid 90's per dozen, compared with \$1.01 last year. The annual average for 1991 is expected to be in the mid- to-high 90's. Per capita egg consumption is estimated at about 232 eggs, about 2-3 less than a year earlier.

Table-egg production is expected to be fractionally lower in 1992. Average wholesale prices for New York Grade A large eggs are expected to decline 3-4 cents per dozen in 1992. Retail egg prices will likely average in the low 90's, a few cents below this year.

Egg exports continue strong, and are estimated to be about 36 percent greater than last year. The outlook reflects strong sales to regular customers such as Japan and Canada, coupled with large EEP sales to Hong Kong. EEP sales are estimated to represent about 15 percent of 1991 egg exports.

Next year's exports are expected to be about the same as this year, around 135 million dozen. Expected lower U.S. prices will help maintain the U.S. position in foreign markets, particularly Japan and Canada. EEP sales will continue to be important for 1992 exports.

Farm Milk Prices On the Rise

For the last quarter of 1991, the average farm milk price is forecast about \$1.50 above the July-September average of \$12.23 per cwt and more than \$2 above the April-June average. During September, the average milk price received by farmers was \$12.60 per cwt, \$1.30 below a year earlier but 30 cents above August.

Weaker milk production from both lower cow numbers and below-normal growth in milk per cow, is expected to continue through early 1992. Large declines in milk prices from late 1990 through the first half of 1991 quickly eliminated the earlier expansion in milk production. Economic recovery will help stimulate commercial use, and should boost first-

quarter 1992 prices above the levels seen in first-quarter 1991.

For all of 1992, however, the forecast points to little change in farm prices for milk from 1991. Although recovery in commercial use of dairy products is expected to continue, dairy market tightness will lessen as production declines abate during the spring and then disappear during the second half of the year.

Manufacturing milk prices continued to rise this summer as milk output declined and wholesale dairy product prices increased. In July, the Minnesota-Wisconsin (M-W) price of manufacturing-grade milk was \$10.99 per cwt, up 41 cents from June. In August, the M-W rose another 51 cents, and by September it increased 52 cents more, but still remained 48 cents below a year earlier.

For further information, contact: Richard Stillman, coordinator; John Ginzel, cattle; Leland Southard, hogs; Lee Christensen, Agnes Perez, and Larry Witucki, poultry; Jim Miller and Sara Short, dairy. All are at (202) 219-1285. **AO**

November Releases from USDA's Agricultural Statistics Board

The following reports are issued at 3 p.m. Eastern time on the dates shown.

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- 6 Dairy Products
- 7 Celery (1 p.m. report)
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Field Crops Overview

This summer's adverse weather is likely to result in tighter U.S. ending stocks of feed grains in 1991/92. With forecast feed grain supplies at their lowest since 1983/84, and projected feed grain use at 229 million metric tons, ending inventories are expected to fall to the lowest level since 1976/77.

Despite adverse weather, soybean production is forecast slightly above 1990/91. Larger soybean supplies and 6-percent-higher use leave ending stocks forecast at 320 million bushels—just below the carryin level of 329 million bushels.

U.S. cotton output in 1991/92 will reach the highest level in 54 years. Even so, cool, wet weather in Texas has slightly lowered October's estimate of cotton output below last month's forecast.

On the international side, the Soviet import situation continues to dominate the outlook for U.S. exports. In late September, USDA announced liberalized U.S. export credit guarantees for fiscal 1991. By late October, all of fiscal 1991 credits, and nearly all of previously allocated fiscal 1992 credits, had been used. (For the latest U.S. crop conditions and outlook, see tables 17-19. The world outlook estimates are in table 23.)

Early Frost Damage to Corn Is Slight

Forecast 1991/92 U.S. corn production is almost 7.5 billion bushels, 5.7 percent below 1990's crop and 2.5 percent above September's forecast. October's upward revisions to yield forecasts for the three top-producing states—Iowa, Illinois, and Nebraska—accounted for over 80 percent of the increase in production. Overall, the national average corn yield is forecast at 108.8 bushels per acre, and season average corn prices are expected to range from \$2.25 to \$2.65 a bushel.

Judging from October 1 yield forecasts, early harvest-season freezing temperatures caused little damage in northern corn-growing states. Temperatures dipped into the low- to mid-20's on September 19 in the Dakotas and Nebraska, and into the upper 20's on September 20 in southwestern Minnesota and western Iowa. Among these states, only North and South Dakota experienced lower October corn yield forecasts than those in September. These two states are expected to account for about 4 percent of the corn harvest in 1991/92.

Corn harvesting has been well ahead of schedule in several Corn Belt states. As of October 13, about 66 percent of the crop had been harvested, compared with a 5-year average of 44 percent for that date. In Illinois, 88 percent had been harvested, and in Indiana, 80 percent. Some areas registered their earliest harvests on record.

When compared with September's forecasts, October's production forecast showed a small rise for sorghum and a small drop for barley, while oats declined nearly 7 percent. Sorghum production is estimated at 567 million bushels, barley at 464 million, and oats at 245 million. Overall, forecast feed grain production is down 5 percent from last year.

Corn and sorghum carryin stocks for 1991/92, based on the survey of September 1 grain stocks, contained few surprises. Reported September 1 corn stocks were 1.52 billion bushels, and 143 million for sorghum. Carryin corn stocks are 13 percent above 1990's level, reflecting the large 1990 crop, while sorghum carryin is down 35 percent.

Forecast feed grain supplies of 267 million metric tons are up 2 percent from last month, but are still at the lowest level since 1983/84. With projected total feed grain use of 229 million metric tons, feed grain ending inventories are expected to fall to 38 million metric tons, the lowest since 1976/77.

Given the forecast of lower world feed grain stocks during 1991/92, USDA Secretary Madigan announced on September 30 a preliminary 5-percent

acreage reduction program (ARP) for corn, sorghum, and barley—the lowest ARP for these grains since 1981. The expectation of larger planted area will dampen the impact of the forecast reduction in 1991/92 stocks.

World Coarse Grain Output Declines

World coarse grain production is expected to fall 4 percent below last year's high level. All coarse grain crops are forecast to drop, with the largest declines expected in barley, rye, and oats. Global use and trade in 1991/92 are both expected to decline, and ending stocks are projected down 8 percent. The ratio of stocks to use is expected to decline from last year to a relatively low 15.2 percent, the third lowest since the mid-1970's.

Lower ARP Announced For Feed Grains

On September 30, Secretary Madigan announced a preliminary 5-percent acreage reduction program (ARP) for corn, grain sorghum, and barley in 1992, down from 7.5 percent in 1991. The oat ARP is legislated at 0 percent through the 1995 crop.

Assuming that corn farmers make decisions on flex acres and program participation as in 1991, and that yields are near trend levels, U.S. corn supplies would rebound in 1992. Larger supplies would allow an increase in domestic use, exports, and stocks. However, a repeat of this year's dry weather could cause corn supplies to dip below the 1991/92 level of 9 billion bushels.

The Secretary has through November 15 to adjust the ARP. The decision to make an adjustment depends largely on whether the total supply of feed grains changes significantly from current estimates. Important factors include world and U.S. ending stocks levels for feed grains, which are historically low, and current world market uncertainties.

Commodity Overview

Foreign corn production is forecast up 2 percent in 1991/92 to a record 283 million tons, led by substantial increases in the European Community (EC) and Eastern Europe. In both regions, improved growing conditions led to a recovery from the poor crops of the previous year. Much of the gain in Eastern Europe is expected in Yugoslavia, leading to potentially large exportable supplies. However, export prospects are highly uncertain, clouded by the impact of civil strife on marketing and transportation.

Among foreign corn exporters, China is expected to have a sharply lower harvest in 1991/92. Farmers reduced plantings after last season's record crop, and yields have also dropped below last year's exceptionally high levels. Production is forecast to drop nearly 9 million tons, but this would still be China's second-largest crop ever, and supplies will continue to outstrip domestic use. Exports are likely to slip, but remain high. China's corn exports more than doubled in 1990/91, reaching a record 6.8 million tons, mainly to Asian markets.

World corn trade is projected down about 3 percent. This reflects a slight drop in Soviet imports, to the lowest in 4 years. Foreign exports will rise slightly, while U.S. exports fall 6 percent to 42 million tons and the U.S. market share diminishes.

Even with higher use and exports, foreign ending stocks of corn are expected to rise fractionally, while those in the U.S. tighten significantly. On balance, world corn stocks are forecast to drop 6 million tons below last season, but remain above 1989/90.

Soybeans Tolerate 1991's Adverse Weather

Despite summer dryness and an early freeze in the Western Corn Belt, October's forecast of 1991/92 soybean production is up substantially above September's forecast, at 1.93 billion bushels. This is just half a percent above 1990 production. As of October 1, soybean yields are estimated at 33 bushels per acre, compared with 31 a month earlier and 34.1 last year.

The early freeze had little effect on overall U.S. production, even in Minnesota and Iowa, where soybeans were planted late in many areas. In those states, yields are up 3 bushels and 1 bushel respectively, from the September 1 estimate.

Soybean carryin stocks for 1991/92, based on the September stocks report, amounted to a relatively high 329 million bushels. Combined with production near 1990/91's level, and 6-percent-higher total use, ending stocks in 1991/92 are forecast at 320 million bushels—near the season's carryin of 329 million.

Demand for U.S. soybeans and soybean products is expected to increase in 1991/92. Reduced competition from Brazil in the first half of the marketing year and expanded credit programs to the USSR and other countries should boost soybean exports to 625 million bushels, and soybean meal exports to 5.9 million tons. Soybean oil exports are forecast to increase to 1 billion pounds, even though the soybean oil market will likely see low prices, weak domestic growth, and intensified competition from alternative oils.

U.S. domestic meal use is forecast at 23.3 million tons, slightly above last year. Growth prospects in the hog industry and moderating prices underlie the improved outlook for meal use.

In 1991/92, soybean prices will likely be supported more by the meal market than the oil market. The average price received by farmers for soybeans is forecast to range between \$5 and \$6 per bushel, compared with \$5.75 for 1990/91. Meal prices are forecast to range between \$165 and \$185 a ton, compared with \$170 for 1990/91. Weaker prices are forecast for soybean oil, at 16-19 cents a pound, versus 21 cents in 1990/91.

World soybean output should rise slightly in 1991/92. Total South American production should increase, but remain well below previous peaks. The substantially higher U.S. crop reported in October and the moderating price outlook may discourage some Southern Hemisphere production. In the Southern

Hemisphere, planting is now underway and will continue until January.

In Argentina, smaller wheat acreage will limit later soybean plantings, since these two crops are commonly planted in sequence. Assuming average yields, production should remain at about the same level as the last two seasons.

In Brazil, soybean production is expected to rebound significantly from 1990/91's drought level, but the government has been slow to release credits for farmers, and dry weather in one important region has discouraged plantings. In contrast, a recently increased allocation of credit to producers, complemented by a currency devaluation, may stimulate last-minute plantings. Brazil's production is projected up 62 percent, but will reach only 17.5 million tons compared with the 1988/89 record of 23.2 million tons.

Cotton Production Highest in 54 years

U.S. cotton production in 1991 is expected to rise 14 percent above last year to 17.6 million bales, the largest in 54 years. This estimate is down slightly from September's estimate due largely to cool, wet weather, along with insect problems, in the Texas Plains.

Harvested acreage of U.S. cotton is expected to reach 13.4 million acres, the largest in a decade, primarily due to the relatively low 5-percent ARP. Yield per harvested acre is estimated at 630 pounds, near last season's 634 pounds.

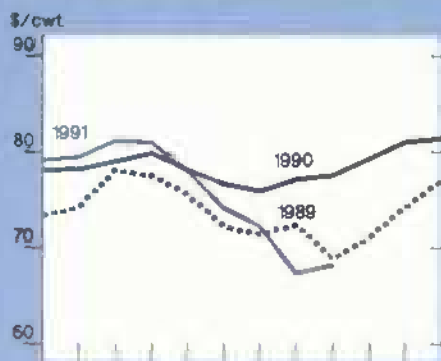
Domestic mill use of cotton is projected to rise to 9 million bales, 5 percent above last season, reflecting continued strong consumer demand for cotton fiber. Exports, on the other hand, are expected to fall to 7.2 million bales, 8 percent below last year.

U.S. cotton stocks are expected to be replenished by this season's large production. Ending stocks in 1991/92 are forecast to reach 3.9 million bales, and the stocks-to-use ratio to climb to 24 percent, up from last season's 14 percent, but still less than the target specified in

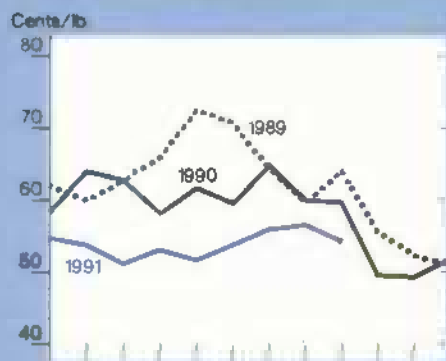
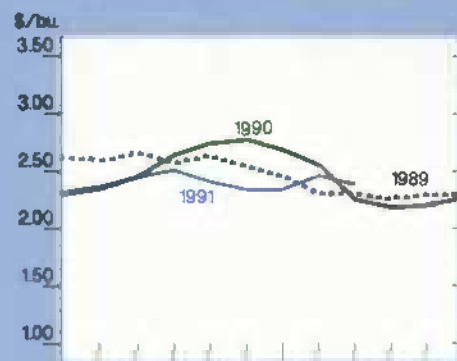
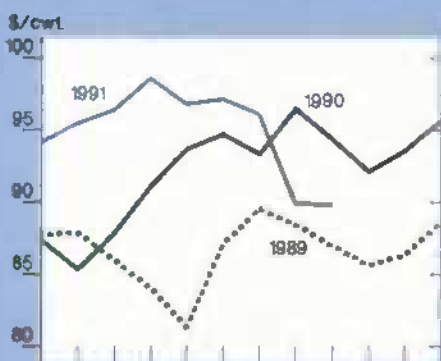
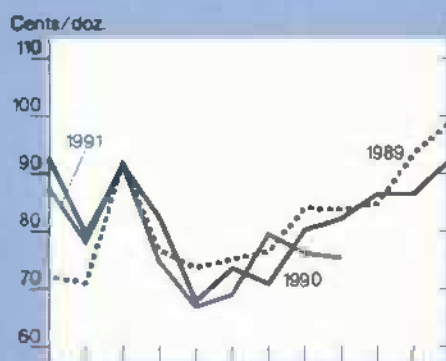
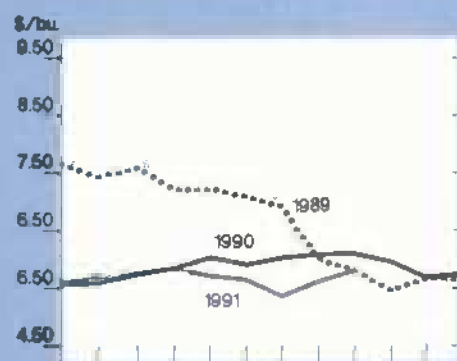
Commodity Market Prices

Commodity Overview

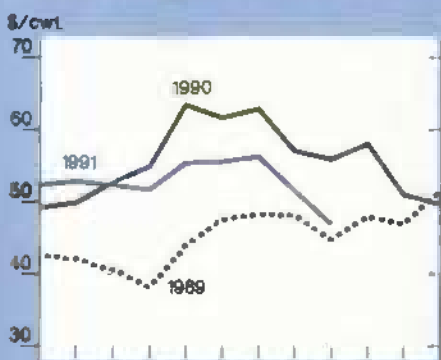
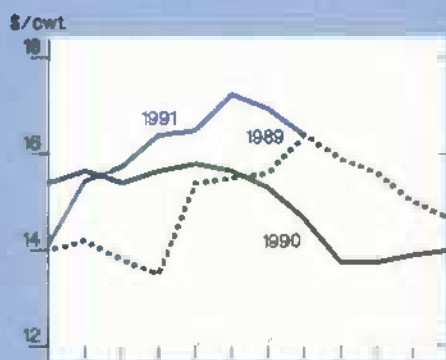
Choice steers, Nebraska



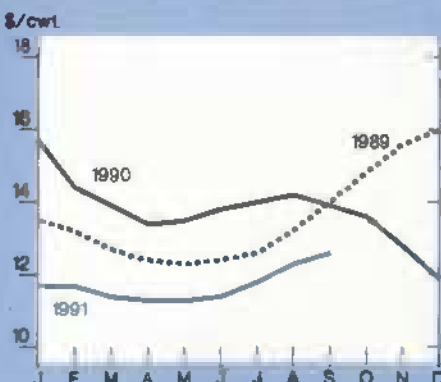
Broilers, 12-city average

Corn, Central Illinois¹Medium steers, Oklahoma City²Eggs, New York³Soybeans, Central Illinois⁴

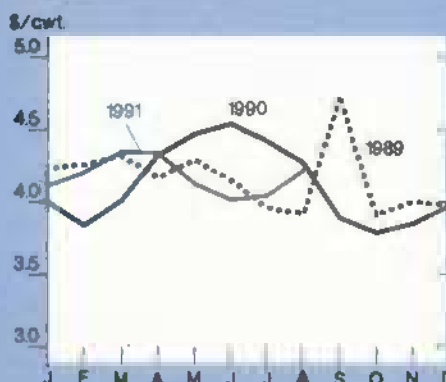
Barrows and gilts, 7 markets, Omaha

Milled rice, SW Louisiana⁵Wheat, Kansas City⁶

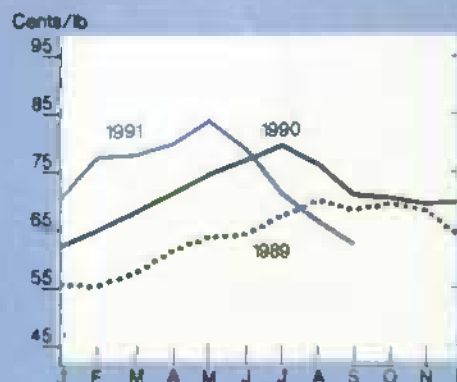
All milk



Sorghum, Kansas City



Cotton, average spot market

¹No. 2 yellow, ²600-700 lbs medium no. 2, ³Grade A large, ⁴No. 1 yellow, ⁵U.S. No. 2 long-grain, ⁶No. 1 HRW.

Commodity Overview

the 1990 farm act of 30 percent (4.9 million bales).

Global cotton production is expected to attain a record 90.7 million bales in 1991/92, 4 percent above last year, with much of the gain in the U.S. Foreign production also is up moderately, notably in China, India, and Pakistan, all major export competitors. The higher production forecast partly reflects the high prices earlier in the season.

The Soviet cotton crop is expected to fall 8 percent to 11 million bales because of lower-than-expected yields. In the Southern Hemisphere, where planting is just beginning, only Brazil is expected to increase area and production.

Global consumption is expected to rise, increasing 3 percent to a record 88.2 million bales. World exports are projected to increase a more modest 1.6 percent to 23.7 million.

Despite increased disappearance, world ending stocks are expected to recover from the very low levels of the last two seasons. Ending stocks are projected to reach 30.2 million bales, 9 percent above 1990/91.

Wheat Prices Begin To Climb

Estimated 1991/92 U.S. wheat production is 28 percent below 1990's near record, at slightly less than 2 billion bushels. Due to the drop in production, supply in 1991/92 will decline 13 percent to 2.9 billion bushels, despite sharply higher beginning stocks.

Domestic use is projected to drop 9 percent to 1.3 billion bushels in 1991/92. Lower residual and feed use is expected to more than offset increases in all other demand categories. With supplies to decline more than total use, forecast wheat ending stocks, at 531 million bushels, are the lowest since 1974/75.

The U.S. average wheat price received by farmers during August was reported at \$2.63 per bushel, up 11 cents from the June-July average of \$2.52. Factors contributing to the price increase include sharply lower production this year and strong domestic use and exports in the summer quarter. To meet expectations for a \$2.70-\$2.90 marketing year average, prices will need to average around \$3 over the rest of the year.

Planting is well underway for the 1992/93 winter wheat crop. As of October 13, winter wheat seeding was 73 percent complete, 1 percentage point ahead of the 5-year average. By that date, planting had progressed far ahead of the 5-year average in the eastern Corn Belt, but was lagging in Idaho, Washington, and Texas. Although Kansas planting progress was at the 5-year average, emergence lagged as topsoil moisture was rated 97 percent short.

Strong Competition in World Wheat Market

World wheat production in 1991/92 is expected to be down 7 percent but still the second highest on record. The EC and Canada are forecast to produce record crops, harvesting 90 million and 33 million tons, respectively. In contrast, Argentina and Australia are forecast to reduce output because of low prices. In addition, drought in Australia is expected to pull yields well below the 5-year average.

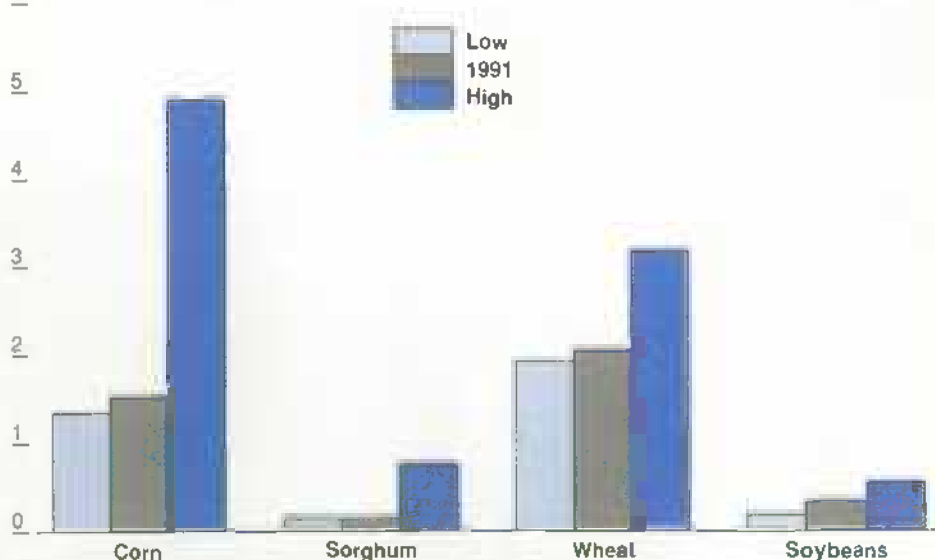
Production among major importers, especially the Soviet Union and China, dropped sharply this year. World trade is projected to expand to the second highest on record, as these countries sharply increase their imports.

High production in the EC and Canada, coupled with their substantial beginning stocks, plus record crops in several smaller exporting countries, means continued intense foreign competition in the dynamic world wheat markets of 1991/92. A 16-percent gain is forecast in foreign trade. The EC, Canada, and several smaller exporters are expected to achieve record export levels, and Argentina's exports are also expected to increase.

Despite increased exports, foreign ending stocks are expected to remain quite high, particularly among major export competitors such as the EC and Canada, likely limiting any sudden price rise. However, in response to much larger imports, export prices recently have begun to increase from relatively low levels.

Corn and Wheat Stocks Near 5-Year Low, Sorghum Stocks Lowest

Billion bushels



Stocks as of September 1. Lows and highs over 1986-91 period.

Update on Soviet Export Credits

As of October 20, no new U.S. export credit guarantees for sale of agricultural commodities to the Soviet Union had been announced. But some previously announced credits had been shifted forward for immediate Soviet use. By late October, all of the fiscal 1991 credits and nearly all of the previously allocated fiscal 1992 credits were used.

On August 26, the U.S. advanced \$315 million of fiscal 1992 U.S. export credit guarantees for the Soviet Union for immediate use in fiscal 1991. Using this credit, the Soviets negotiated a few sales in early September. But arranging loans from banks proved difficult.

Under the GSM-102 program, the Commodity Credit Corporation (CCC) normally guarantees 98 percent of the loan principal. In addition, only 4.5 percentage points of loan interest is guaranteed by CCC. Banks were reluctant to offer loans on these terms.

On September 24, USDA announced liberalization of coverage on the \$200 million of fiscal 1991 export credit guarantees that remained unused. The CCC agreed to guarantee 100 percent of the principal for fiscal 1991 loans on sales transacted after the announcement. In addition, it guaranteed loan

interest equal to the coupon-equivalent yield of the 52-week U.S. Treasury bill auction average.

Sales to the Soviet Union were registered immediately, using nearly all of the remaining \$200 million. Under the new CCC financing provisions, loans were obtained in a more timely manner than for sales earlier in September.

When the new fiscal year began on October 1, another \$585 million in previously announced credits became available. Of this, \$185 million was scheduled for October and \$400 million for February release.

On October 1, the \$185 million was allocated as scheduled, and President Bush also announced that the \$400 million would be moved forward to October use. Allocation of the \$400 million occurred on October 4. Both allocations also received the liberalized loan and interest guarantees of the previous month.

By October 23, sales had been registered using all or nearly all the credits allocated in the previous weeks for corn, wheat, soybeans, soybean meal, poultry, and to cover freight. This virtually exhausted all previously allocated fiscal 1992 credits.

Arkansas Rice Production Up Substantially

U.S. rice production in 1991/92 is expected to increase slightly to 157.7 million cwt, due in part to a projected rise in harvested acreage. Yields should modestly exceed last year's reduced level, but fall far below the record set in 1989.

As of October 10, substantial shifts in production by state and by type are expected. Arkansas output, forecast to increase 18 percent, would boost that state's share of total production to 45 percent, compared with 39 percent in 1990 and 41 percent in 1989.

The projected gain in Arkansas' output is expected to more than offset a forecast 16-percent drop in California's production. California's share of total rice output has slipped from 19 percent in 1990 to a projected 16 percent in 1991. Production of long grain rice is forecast up 3.9 percent for 1991, while combined medium and short grain output is expected to fall 3 percent. Most medium grain rice and virtually all short grain rice is grown in California.

Overall, U.S. rice supplies in 1991/92 are forecast to increase less than 1 percent to 187.3 million cwt. With a projected 2.5-percent increase in domestic use and slightly lower exports, carryout stocks are expected to drop slightly below a year earlier. The stocks-to-use ratio is forecast to be below 17 percent for the fourth consecutive year.

World rice production in 1991/92 is forecast at 344 million tons (milled basis), down 2 percent from 1990/91. Most of the decline is expected in China and India, which together produce over half the world's crop.

Calendar 1992 trade is expected to rise 3 percent to 12.9 million tons, due largely to increased imports by Iran, Iraq, and the Philippines. Competitors' exports are forecast up 2 percent in 1992, with the largest gain expected in Thailand where production is forecast to rebound from last year's weather- and pest-damaged crop.

Calendar 1992 U.S. exports are projected to rise 5 percent to 2.3 million tons, and U.S. market share will increase slightly to 17.8 percent. Tight U.S. supplies and high prices relative to Asian exporters will continue to constrain U.S. exports. [Joy Harwood (202) 219-0840 and Carolyn Whitton (202) 219-0824]

For further information, contact:
Sara Schwartz, world food grains;
Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Tom Tice and Jim Cole, domestic feed grains; Nancy Morgan, world oilseeds; Roger Hoskin, domestic oilseeds; Scott Sanford, world cotton; Bob Skinner and Les Meyer, domestic cotton. World information (212) 219-0820; domestic (202) 219-0840. **AO**

U.S. exports are projected to increase 6 percent to 30 million tons. But in the face of increased foreign competition, the U.S. market share is forecast to fall from 30 to 28 percent, the fourth consecutive annual drop.

U.S. export prices are expected to remain competitive. U.S. bonuses for wheat sales under the Export Enhancement Program are relatively high, allowing the U.S. to match subsidized EC export prices in major markets.

Commodity Overview

Specialty Crops Overview

Initial orange production forecasts for 1991/92 show California beginning to recover from its 1990 freeze, but output in Florida falling below last year's production. Despite larger U.S. supplies, fresh orange prices are expected to remain relatively strong this season, because quality is higher. Export sales of fresh oranges are expected to recover from low levels experienced last season. Grapefruit and lemon production are expected lower.

Harvested acreage of seven fresh market vegetables is expected to fall 6 percent during the fall season in major producing states. Severe whitefly infestations in Arizona and California will result in higher prices for lettuce, fresh broccoli, and cauliflower this winter.

The Secretary of Agriculture announced a sugar tariff-rate import quota of 1.385 million metric tons for fiscal year 1992, 34 percent below fiscal 1991. U.S. sugar production is expected to rise 6 percent during the 1991/92 season. (For updates on market conditions for specialty crops, see tables 20-22.)

Orange Output Increases In California

Initial orange production estimates for the 1991/92 season show a partial recovery in California from 1990's cold weather damage, but lower output in Florida. Florida production is forecast at 136 million boxes, 10 percent below last year but 23 percent higher than 2 years ago. Prospective navel production in California and Arizona stands at 29.7 million boxes, 82 percent above last season. Total U.S. orange production should reach 8.2 million tons, up 4 percent from 1990/91.

California-Arizona industry sources anticipate fresh shipments (domestic and

export) of 48 million cartons of navel oranges in 1991/92, 99 percent above 1990/91, but still below the average for previous years. Sales jumped to 65 million cartons in 1989/90 following the 1989 Christmas freeze that reduced fresh shipments from Florida and Texas. Cold temperatures in December 1990 destroyed much of California's 1990/91 orange crop, reducing last season's fresh shipments. Despite the larger supply this year, fresh orange prices are expected to remain relatively strong this season because of higher quality.

Export sales of fresh oranges in 1991/92 are expected to improve from the low levels experienced last season. The quality of California oranges, which significantly affects the quantity and value of export sales, reportedly is good.

Florida's processing oranges are expected to average 1.5 gallons of 42° Brix frozen concentrated juice (FCOJ) per 90-pound box during the 1991/92 season. Juice yield is an important factor in the amount of FCOJ production.

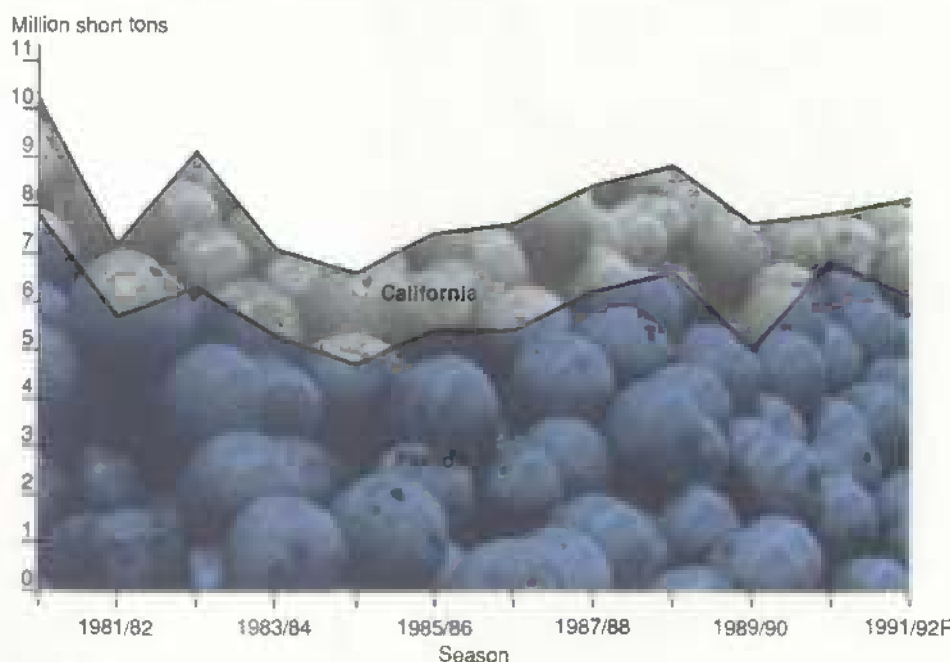
FCOJ wholesale prices edged higher during September, perhaps in anticipa-

tion of a smaller Florida crop. But prices bolted upward when the October production forecast fell below expectations. Barring major changes in production prospects in Florida or Brazil, FCOJ prices are expected to continue above last season's range of \$1.15 to \$1.20 per pound solids.

Prospective 1991/92 U.S. grapefruit production (excluding California "other areas" production) is 11 percent lower than last year. Forecasts place Florida's crop at 42.5 million boxes, and California's "Desert" grapefruit output at 3.5 million. Texas reportedly will ship only a limited amount of grapefruit during the upcoming season because production has not yet recovered from losses caused by freezing temperatures in 1989. Forecasts place Texas' 1991/92 production at 115,000 boxes.

Nearly one-third of Florida's seedless grapefruit will be the red variety. Red seedless grapefruit production is expected to rise in coming years, while output of white and pink seedless grapefruit will probably decline.

California Orange Crop Recovers from Freeze



F = Forecast

Florida and California accounted for 98.6% of U.S. orange production over the last 5 years.

Commodity Overview

The smaller Florida crop will give fresh grapefruit prices a boost in 1991/92. Larger average size and improved quality will also enhance prices.

Florida expects to export 19 million cartons, essentially unchanged from the 19.4 million in 1990/91. The industry plans to increase funding for export marketing programs (which includes USDA funds from the Market Promotion Program) in 1991/92.

Lemon production is expected to reach 18.1 million boxes, 5 percent below last year. The decline is the result of crop damage during the December 1990 freeze. Prices likely will be higher than last season because of the lower volume and higher quality.

Whitefly Lowers Winter Vegetable Output

Harvested acreage of seven fresh market vegetables (broccoli, carrots, cauliflower, celery, sweet corn, lettuce, and tomatoes) is estimated to fall 6 percent in major producing states. Decreases in the acreage of celery, corn, lettuce, and tomatoes offset increases in broccoli, carrots, and cauliflower.

Tomato acreage in Florida fell 22 percent. Heavy rains in August and September delayed scheduled planting.

The lettuce area for harvest is down 9 percent from 1990. A serious whitefly infestation has lowered production prospects for winter vegetables from the desert areas of California, Arizona, and northern Mexico—the major sources of lettuce, fresh broccoli, and cauliflower during winter. As a result of supply cuts from the whitefly damage, fresh vegetable prices are expected higher this fall and winter than a year ago.

Estimated U.S. onion production is down 6 percent in 1991 from the record 1990 output of 52.8 million cwt. Acreage is down 1 percent from a year earlier and estimated yields are 3 percent lower. The biggest drop in output occurred in New York, where drought cut per-acre yields 32 percent. Prices are expected

higher than 1990/91 due to the smaller supply.

Per capita consumption of selected major vegetables declined marginally in 1990 to 337 pounds (farm-weight basis). Vegetable use is measured using a weighted sum of 17 individual vegetables. Lower production of fresh tomatoes, broccoli, and head lettuce is the major reason for the decline. Small gains are reported in per capita use of carrots, onions, green peas, and sweet potatoes.

On average, vegetable use increased 1 percent per year between 1979 and 1989. Frozen vegetables saw the fastest rate of increase, 2.2 percent per year. Canned vegetable use grew only 0.2 percent per year. Per capita use of potatoes grew an average 1 percent per year between 1980 and 1990.

Lower Sugar Import Quota Announced

The Secretary of Agriculture announced a tariff-rate import quota for sugar of 1.385 million metric tons (1.53 million short tons) for fiscal year 1992, 34 percent below the fiscal 1991 level. The reduced quota reflects expectations that use will not keep pace with growth in domestic production.

The tariff-rate import quota is used to balance sugar supply with use, and ensure that U.S. sugar program loans will be repaid. The U.S. sugar program requires sugarcane to be supported at not less than 18 cents a pound for raw cane sugar. The beet sugar loan rate reflects the loan rate for cane sugar, historical returns to both sugarcane and sugarbeet growers, and fixed marketing expenses.

Starting October 1, 1990, the tariff-rate import quota replaced an absolute quota system that had regulated U.S. imports since 1982. The tariff-rate quota, which allows an annually determined amount of sugar into the country at a relatively low duty and additional imports at a much higher duty, is intended to bring the U.S. into compliance with world trade rules.

USDA's current sugar production forecast for fiscal 1991 is 7.4 million short tons, raw value, 6 percent above 1990/91. Production in Louisiana is forecast 415,000 tons higher than last year, when freeze damage from December 1989 cut production.

Sugarbeet output is estimated at 27.4 million tons, marginally lower than 1990/91. Less acreage in California offset increases in Idaho, Michigan, and Nebraska, and higher yields in Minnesota and North Dakota.

U.S. sugar use is expected to rise 1.7 percent during fiscal 1992. Sugar use declined during the early 1980's, reversed trend after 1985, and showed strong growth in the late 1980's. The highest growth in the past 5 years has been in the use of sugar in confectionery products and in bakery, cereal, and related products. [Glenn Zepp (202) 219-0882]

For further information, contact: Boyd Buxton, fruit; Gary Lucier, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture; Lewrene Glaser, industrial crops. All are at (202) 219-0883. **AO**

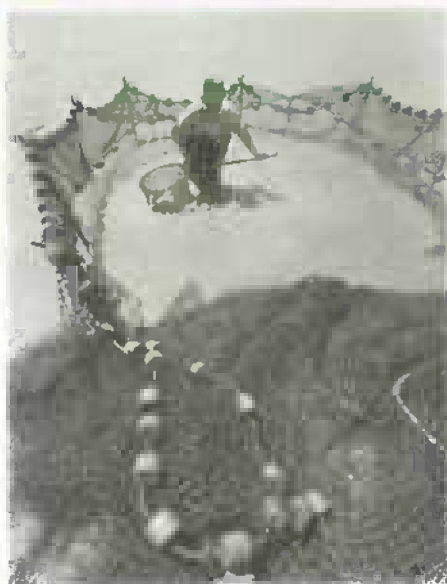
Upcoming Reports from USDA's Economic Research Service

The following are November release dates for summaries of the ERS reports listed. Summaries are issued at 3 p.m. Eastern time.

November

- 1 African Food Needs
- 14 Livestock & Poultry
- 15 Fruit & Tree Nuts
- 19 Wheat
- 20 Agricultural Outlook
- 21 Cotton & Wool
- 22 Feed

Commodity Spotlight



Aquaculture Production Rising

Farm-raised fish and shellfish production in the U.S. was estimated at 860 million pounds in 1990—output has more than tripled over the last decade. Fueling most of the growth has been an expansion in catfish production. Growth in newly commercialized species—such as hybrid striped bass, tilapia, and sturgeon—will be aided by adoption of production and processing technologies already proven effective in the catfish and trout industries.

Catfish production has currently outpaced consumer demand. Grower inventories of food-sized fish on July 1 were up 15 percent from a year earlier. While processor sales this year are 5 to 6 percent above 1990, the increased inventory has caused both grower and processor prices to fall. In August, grower prices were 60 cents per pound, 21 percent lower than in August 1990 and the lowest farm price since September 1987.

While aquaculture has grown rapidly over the last decade, domestic landings by the wild-catch industry and imports are still the two largest sources of edible fish supply, and will probably remain so

for some time. U.S. landings of edible seafood have risen from 3.7 billion pounds in 1980 to 7.3 billion pounds, a 97-percent increase.

However, the increase in domestic landings between 1980 and 1990 is almost entirely the result of increased landings of Alaska pollock. If Alaska pollock is excluded, domestic landings would have risen to only 4.1 billion pounds, an 11-percent increase. Recent pollock landings are estimated to be close to their maximum sustainable yield, so future landings should not show large increases.

Through 1987, stable domestic seafood landings and growth in domestic demand led to an increase in seafood imports. U.S. seafood exports, while rising, did not grow as fast. So the U.S. seafood trade deficit grew from \$1.8 billion in 1980 to \$4.1 billion in 1987.

Starting in 1988, with the huge increases in pollock landings, U.S. exports began to expand more rapidly. At the same time, imports slowed. This resulted in a contraction of the seafood trade deficit from its high point in 1987 to \$2.5 billion in 1990.

West Holds Large Share of Fish Farming

The majority of domestic aquaculture production is currently concentrated in the southeast and south central states, home of the catfish and crawfish industries. However, production is not confined to those areas. In a survey by the Western Aquaculture Consortium, 1989 aquaculture production in the region was estimated at 146 million pounds, 18 percent of national output. The survey included Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

While Idaho, Washington, and California are the largest western aquaculture producers, some production was reported in all the states. Production was spread over a number of species of finfish, shellfish species, and aquatic plants.

Trout production is by far the largest segment of the western aquaculture industry, accounting for almost a third of total production. In finfish production, trout is followed by salmon, catfish, and tilapia. Other species gaining in production are striped bass, sturgeon, largemouth bass, bluegill, and crappies. Among shellfish, the most valuable product from the region is oysters, followed by clams, mussels, abalone, and small amounts of scallops and crayfish.

Producers Are Optimistic...

Producers surveyed by the Western Aquaculture Consortium were asked to estimate their production potential for 1994. The results indicate that most growers are optimistic about long-run growth prospects.

Trout growers estimated that their production would expand from 48 million pounds in 1989 to 63 million in 1994. Salmon producers had even higher expectations, estimating production would more than triple between 1989 and 1994. In total, foodfish producers estimated that output would jump from approximately 63 million pounds in 1989 to over 102 million by 1994.

Shellfish growers also forecast expansion by 1994, but at a much slower rate in general. Total shellfish production in the region is anticipated to reach 97 million pounds in 1994, compared with 82 million in 1989. Oyster production will continue to be the dominant industry, but mussel producers are estimating that their production will more than triple from 600,000 pounds in 1988 to over 2 million in 1994.

...But Environmental Concerns Mount

A number of factors will influence how quickly aquaculture can expand in the West. First, quality water resources are critical to aquaculture production, and this could be a limiting factor in many areas. This is a key issue for production

in California, where competition for its remaining water resources has markedly stiffened. And, the extent to which state governments allow ocean waters to be used for aquaculture will have a significant impact on the ability of the salmon and shellfish industries to expand.

Second, Alaska presently allows shellfish farming but bars all finfish farming. Alaska would otherwise have the greatest potential for marine aquaculture development in the West.

Third, waste disposal presents a growing problem to the aquaculture industry. Producers need to cut waste generated by both uneaten feed and fecal material. Disposal of these materials will be more tightly controlled in coming years, and producers will be pressured to reduce wastes. Producers can achieve reductions in waste per pound of production by growing fish that are more efficient feed converters. The less feed required, the less waste produced.

A second component of the waste problem occurs at the processor level. The more seafood sold as fillets or further processed products, the greater the waste disposal problem of the processor.

Changes on the Horizon

A number of issues on the horizon could bring changes to the U.S. aquaculture industry in the coming years. Some changes will attract little interest outside the industry. Other changes will be carefully scrutinized by consumer groups, government regulatory agencies, and a public ever more concerned with the overall safety of the food it consumes and of the environment.

The aquaculture industry is just beginning to tap the potential gains that may be available through selective breeding. For many species, single-sex fish populations show a definite production advantage—one sex may grow faster than the other, although the sex varies by species. Growers are developing ways to produce single-sex populations by exposing fry to hormones early in their development.

Other producers are using sterile fish or shellfish instead of single-sex populations. Among the advantages are faster growth, year-round marketability, and the ability to grow species that would normally be prohibited. Sterile fish or

shellfish can grow faster because energy is directed to growth instead of sexual development. And some states that prohibit the import or production of non-native species may allow the production of sterile fish.

Researchers are also investigating the possibility of transferring genes that control the production of growth hormones from one species to another, to develop faster growing fish. It may be some time, however, before developments in this field can be applied commercially.

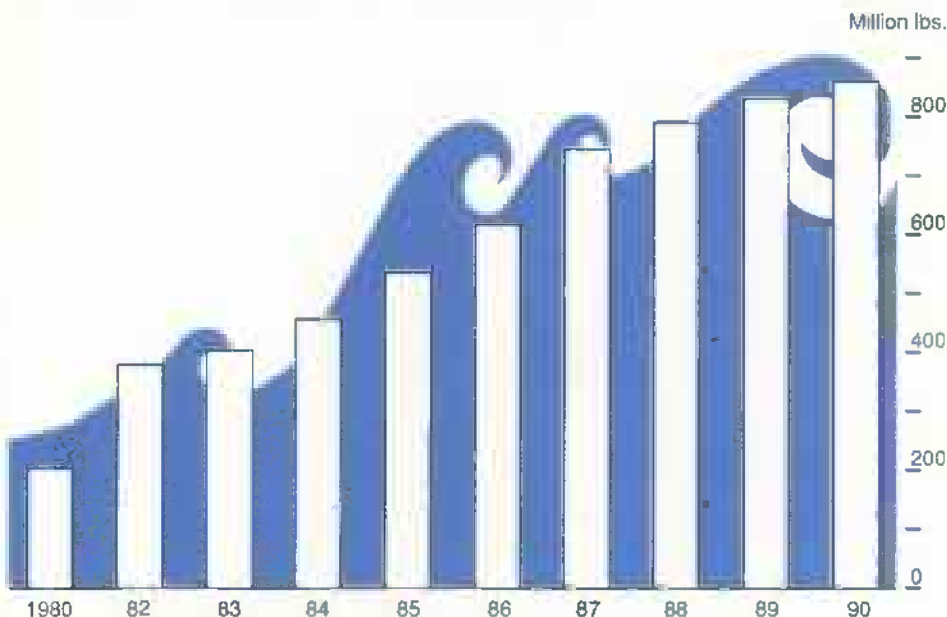
Research is underway to develop more efficient production systems by controlling or managing predators, using production sites with low-cost heat sources, and developing therapeutic drugs to combat diseases.

While attention has focused on such high-tech changes as biotechnology and gene transfer, considerable increases in productivity and value can be achieved simply through improved nutritional programs that include: feeds specifically tailored to the needs of species; feeding strategies that promote growth or reduce the amount of fat; feed formulations using lower cost ingredients; and feed additives that result in consumer health benefits.

For example, one program is currently underway to increase the percentage of omega-3 fatty acids in farm-raised fish by using special finishing diets. Higher omega-3 fatty acids have been positively linked with lower incidences of heart disease.

More research is needed to help aquaculture growers deal with the wide variety of issues that could affect the future growth of their industry. To meet this need, five regional aquaculture research centers have been established. Each of the centers is focusing on problems affecting production of the major species for that region. Future growth in aquaculture will come from incorporating advances in genetic selection, production technologies, disease control, and feed conversion.

U.S. Aquaculture Production Triples Over a Decade



No data available for 1981.

Commodity Spotlight

In spite of short-run adjustment problems, the increasing demand for fish and shellfish products and relatively stable future domestic landings from wild stocks should allow continued expansion of aquaculture production in the U.S. Domestic aquaculture producers will have a growing market at home, but will be faced with increased environmental regulations and competition from foreign producers as aquaculture expands worldwide. [Dave Harvey (202) 219-0888] **AO**

Demand, Technology Shape U.S. Hog Industry

The U.S. hog industry is being reshaped by changes in both supply and demand. On the demand side, the industry has been recast by health-related concerns, changing lifestyles that call for a more convenient food product, and competition from other meats. On the supply side, technologies in both crop and livestock production have been driving forces.

The combination of developments in demand and technology have led to larger and more specialized hog operations. Presently, about 94 percent of the hog inventory is located on less than 100,000 operations. Less than 11,000 operations account for 42 percent of the total hog inventory. Buyers of hogs—slaughterhouses, packers, and processors—have also greatly reduced their numbers and increased their scale of operations.

For example, in 1990 two-thirds of hogs were slaughtered by about 2.5 percent of all slaughter plants. These 26 plants operated on a large scale, with an average annual slaughter of more than 1.5 million head.

Technology & Scale Are Linked

Today's industry structure reflects several forces at work in agricultural production generally and among hog producers in particular. Many hog enterprises were displaced by growth and later specialization in feed grain enterprises, made possible by increased use of chemicals, fertilizers, and large field machines starting in the 1950's.

Grain farms expanded acreage to attain economies of size in using specialized equipment. As opportunity costs rose for land and labor allocated to hog production, hog operations on some expanding grain farms were dropped. In addition, price and income support reinforced grain production specialization and offered an alternative form of risk protection formerly provided by hog production.

Farmers remaining in hog production adopted technologies that improved labor efficiency and reduced land requirements. For example, sub-therapeutic doses of antibiotics introduced in the 1950's, as well as other health

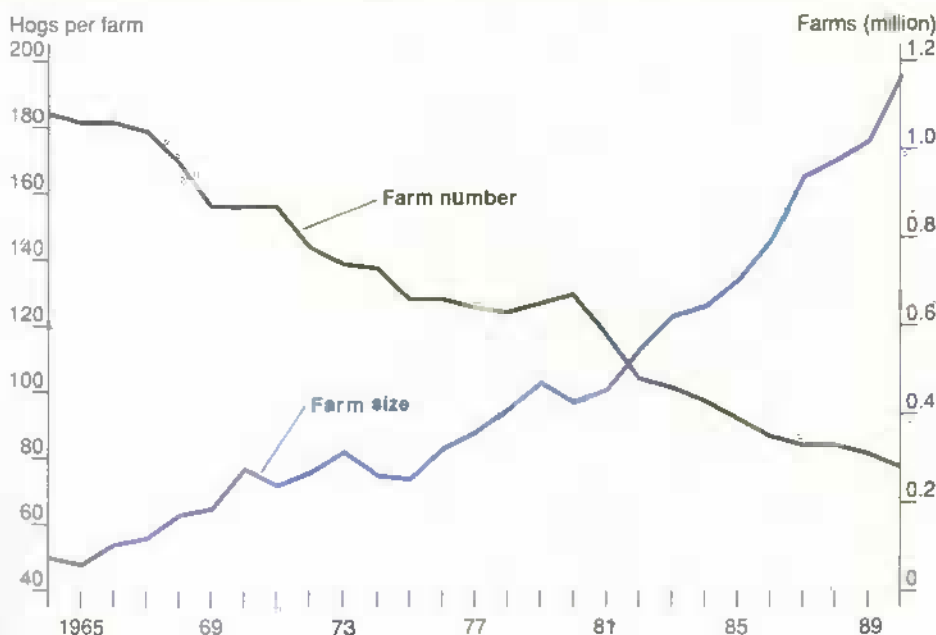
safeguards, permitted hogs to be kept in high population densities.

With herd health more secure, improved housing designs were adopted, allowing the substitution of buildings for land. Continuing improved performance, due to better feed conversion and higher numbers of pigs saved per litter, also contributed to greater efficiency. Such factors helped the average U.S. herd size double by the mid-1960's and helped increase the number of hogs marketed by an efficient operation to 700-800 per year from the average of under 200 a decade earlier.

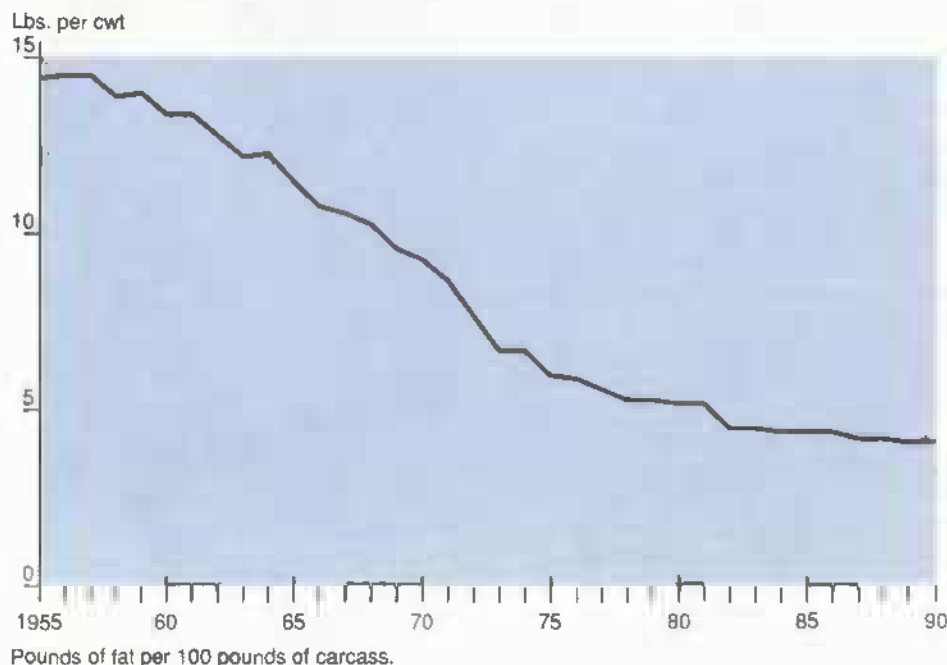
Although the improved housing designs substantially reduced labor requirements, they created new problems related to crowding, inadequate ventilation, and potential environmental impacts. Through the 1970's and 1980's, many of these problems were corrected and further herd consolidation continued unabated.

Improvements in material handling and environmental control inside these buildings allowed efficient-size operations to increase to over 10,000 marketings per year by the end of the 1980's. The

U.S. Hog Farms – Fewer, but Larger



U.S. Hog Industry Trims the Fat



average U.S. herd size in 1990 was triple the 1970 herd size, aided greatly by improved housing facilities and equipment that generated efficiency in feed and waste management.

As housing design changed to accommodate improvements in material handling and environmental control, other potential production bottlenecks were recognized: availability and quality of labor; manure management; and control of odors, dust, parasites, and noise. But with larger—and fewer—production sites, regulation and enforcement of state and Federal laws became more feasible, to address aesthetic and environmental concerns, such as odor and animal welfare issues.

As producers increasingly specialized in hog operations, the onetime sideline or "mortgage lifter" activity of raising hogs became a capital-intensive, year-round livelihood. The movement to large-scale operations forced producers to become more knowledgeable in the areas of feeding rates, disease control, manure handling requirements, and scheduling of farrowings and marketings. Technologies that permitted producers to enhance their capabilities in these areas were quickly adopted, such as computer-

assisted record keeping and feeding systems.

Large-scale production also means increased exposure to risk from many sources, related not only to the physical production process, but also to input and output prices and credit terms. Vertical coordination offers potential gains to the hog sector, reducing risk but sacrificing some producer independence. Growth in average operation size, lenders' concerns following the financial problems of the 1980's, and limited marketing options in localities with few large processing facilities, could force producers and processors toward vertical integration.

Another approach to risk management is contract growing. Contract production, which accounted for 1-2 percent of all pork produced in the late 1970's, grew to at least 12 percent a decade later. Analysis suggests this figure could reach 20 percent by the end of the 1990's.

With contracting, producers custom-feed pigs or produce them for others to finish. Producers gain by receiving more stable income while expanding or modernizing facilities. Some contracts include a total plan for improvements, such as assistance in housing design, construction dis-

counts, and construction loans. Some producers also receive feed, veterinary service and medicines, transportation of livestock, and management assistance. Producer income from contract growing is usually on a per-animal basis, with a schedule related to production performance.

The drive for advancements in production and improved product quality and flow continue. New developments loom in the future, with promising improvements in biotechnology, pricing methods and management skills, and organizational adaptations.

Biotechnology may make it possible to acquire desirable traits from breeds in other countries through gene transfer—traits such as increased disease resistance, lower fat content, and larger litter size. Improved management skills may come from greater specialization in various production stages and higher skilled individuals using modern information systems. Carcass merit pricing could provide incentives to trace the performance of individual animals through production records.

Changes in Demand Lead To Leaner, Fewer Hogs

Until the 1950's, pork was Americans' meat of choice. By the mid-1950's, beef surpassed pork in per capita consumption; by the mid-1980's, poultry overtook pork, as health implications of fat intake were increasingly identified. To keep up with the competition, pork producers strived to maintain market share mainly by lowering costs of production and developing a leaner product.

Producers and research institutions explored new technologies for producing a leaner, meatier hog as well as for cutting costs. Attention to qualities such as carcass length and backfat thickness led researchers and breeders literally to transform the hog into an animal with less fat and improved feed conversions. From 1970 to 1990, the amount of fat per 100 pounds of carcass has been cut by more than half. Meatier hogs with less lard have enabled slaughterers to process heavier hogs without the problem of

Commodity Spotlight

additional fat. The increase in average slaughter weights continues.

With production of heavier but leaner hogs, the market required fewer hogs and fewer producers. The shift toward leaner hogs by itself meant that more than 20 percent fewer hogs were needed to attain pork production levels of the late 1980's, compared with 30 years earlier.

In addition to health concerns, demographic and socioeconomic trends are generating consumer preferences that are also reshaping the hog industry. The demand for meals requiring less preparation time means that meats suitable for including in ready-to-eat convenience foods and in fast-food selections will capture more of the retail market. Pork made its mark in the convenience group years ago with the hot dog, but today's retail meat counter offers hot dogs made from beef, chicken, and turkey, in competition with the traditional pork hot dog. In the fast-food area, pork faces stiff competition from poultry—over 40 percent of poultry is marketed through food service channels—and from beef.

The potential for growth in demand will depend to a large extent on how well pork competes with other meats. Health-related concerns, changing lifestyles, and competition from other meats have put pressure on hog prices and prompted producers to cut costs. The final product must not only conform to consumer tastes, but must also be priced competitively.

One Step Into the Future

The evolution of U.S. hog and pork production suggests multiple sources of change. In hog production, many changes did not even originate in the sector, but followed developments in crop production and specialization, alternative income opportunities outside agriculture, credit availability, public policy (such as tax treatment), and macroeconomic conditions—for example, changes in interest rates and declining land values.

Change in the future will most likely again be influenced by factors outside the hog sector. This is particularly true in pork processing and product fabrication, with many technologies "borrowed" from other industrial fields, such as the introduction of robotics. Processing will be shaped by even newer technological adaptations, spurred by the desire to produce ready-to-eat, microwavable pork and other convenience food products.

These changes are generally not size-neutral—they can be expected to reinforce past trends in the concentration of hog farm numbers and slaughtering plants. A complicated mix of demand and supply factors continues to reduce numbers of both producers and processors. This significant structural change could emerge as a top issue for producers concerned with prices and markets, and processors needing adequate supplies.

Future technological advances also hold an important key to resolving pressing issues such as lowering fat content, improving existing products and introducing new ones, and production-related concerns such as waste handling, environmental impacts, and animal welfare. [Phil Spinelli (202) 219-0713] AO

World Agriculture & Trade



Courtesy EC Delegation, Washington, D.C.

New EC Reforms In the Wings

The 1991/92 marketing year will see changes in EC policies affecting grains and oilseeds. Large grain stocks and budget outlays led the EC to adopt a supplemental 1-year set-aside program for grains in order to reduce area planted to surplus crops. In keeping with a 1989 GATT ruling, the EC has also adopted a revamping of the oilseed regime.

EC Launches New Set-Aside Program

European Community (EC) farm ministers are debating proposals that would radically reform the Common Agricultural Policy (CAP). Increased EC spending on agriculture, and continued accumulation of huge stocks of grains, beef, and dairy products, have placed reform at the top of the EC agricultural policy agenda.

Since the CAP reform debate is expected to be long and contentious, the EC has adopted certain stopgap measures, as part of a 1991/92 price package, in an attempt

to control production and expenditures until reforms can be fully implemented. The new 1-year set-aside scheme, which supplements the existing 5-year set-aside program, is designed to reduce area planted to grains and other selected crops for the 1992 harvest.

Under the 1-year program, producers who sign up will be required to set aside at least 15 percent of their eligible area, including at least 15 percent of acreage planted to grains. All area planted to cereals, oilseeds, and pulses in 1990/91 is eligible for the program. Participating farmers will receive a per-hectare payment for the land they remove from production.

The payments to producers will be at least equal to the EC's contribution under the 5-year program, and separate contributions by member nations also are allowed under the regulations. In addition to these payments, participants will be reimbursed for the 5-percent co-responsibility levy (a tax on off-farm grain sales) paid during 1991/92.

The contribution by national governments for the 1-year program can be as high as the national contribution to the existing 5-year program. France, the EC's largest grain producer, has announced it will provide an additional premium of 800 francs per hectare (\$57 per acre) to encourage participation in the new set-aside program. The UK, on the other hand, has indicated that no national premium will supplement the EC payment to its farmers under the program.

The 1-year set-aside will apply in certain regions where the existing program does not. Parts of Spain exempted from the 5-year set-aside for environmental or socio-structural reasons are eligible, but no more than 20 percent of a farm's total arable area can be removed from production on the eligible area. Land in eastern Germany, now covered by a special national farm policy, is also eligible for the new EC program.

Participants must maintain idled land with a suitable vegetative cover or other means. The payment can be 10 percent less if this requirement is not met. The

application deadline for the new program is December 15, 1991.

While the goal of the 1-year set-aside is to limit production, chiefly of grains, from the 1992 harvest, the effect on output is not expected to be significant. The EC Commission estimated that the program would reduce cereal production by 5 or 6 percent. European analysts, however, believe output may fall by only 1 or 2 percent because participation rates will be below the Commission's expectations.

Production Control Is Key To CAP Reform Plans

The EC implemented its 5-year set-aside program in 1988 in an unsuccessful attempt to control surplus production and expenditure. The program has not prevented EC grain output from exceeding the maximum guaranteed quantity (MGQ) of 160 million tons every year since 1988 except one. Since the establishment of the program, 1.9 million hectares (4.7 million acres) of arable land have been removed from production. This represents less than 3 percent of arable land in the EC, compared with

about 14 percent of U.S. arable land diverted under acreage reduction and long-term conservation programs during 1990.

Despite the limited effectiveness of the set-aside program so far, the Commission will continue to emphasize production control in future EC farm policy.

One CAP reform proposal would include a set-aside requirement for commercial farmers who plant more than 20 hectares (49 acres) of grains, oilseeds, or protein crops. Farmers would receive a compensatory payment for land taken out of production, up to a maximum of 7.5 hectares (18.5 acres). The payment would equal the difference between the current EC cereals price and the lower proposed target price after CAP reform—a difference of about 55 ECU per hectare (\$28 per acre). [Michael T. Herlihy and Mary Lisa Madell (202) 219-0610]

Almost Half of Set-Aside Area Is in Germany

EC member	Land set aside			Total
	1988/89	1989/90	1990/91 [†]	
	Hectares			
Belgium	339	151	250	740
Denmark	—	—	5,520	5,520
France	14,220	39,702	112,653	166,575
Greece	—	250	NA	250
Ireland	1,141	438	187	1,766
Italy	91,617	[†] 266,336	250,752	608,705
Luxembourg	6	31	48	85
Netherlands	2,582	6,155	5,869	14,606
Portugal ²	NA	NA	NA	NA
Spain	34,229	13,858	36,000	84,087
United Kingdom	51,567	50,321	30,734	132,622
West Germany	165,125	57,259	71,000	293,384
Former East Germany ³	—	—	599,243	599,243
Total	360,826	434,501	1,112,256	1,907,583

NA = Not available, — = Not applicable. 1 hectare = 2.47 acres.

¹ Provisional. ² Portugal is not required to implement the program until 1994. ³ In 1990/91, set-aside in the five states of the former German Democratic Republic was implemented on the basis of a national scheme without Community participation.

Source: Commission of the European Communities.

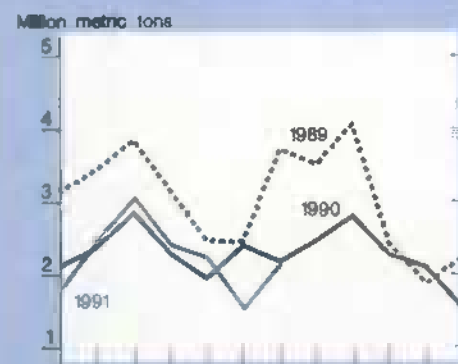
World Agriculture & Trade

U.S. Trade Indicators

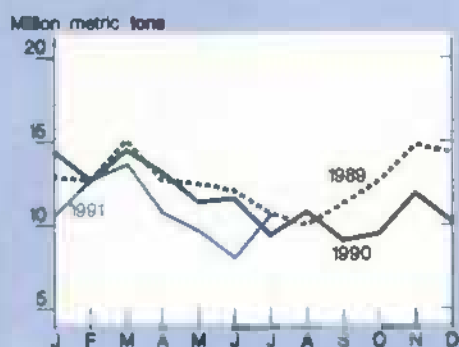
U.S. agricultural trade balance



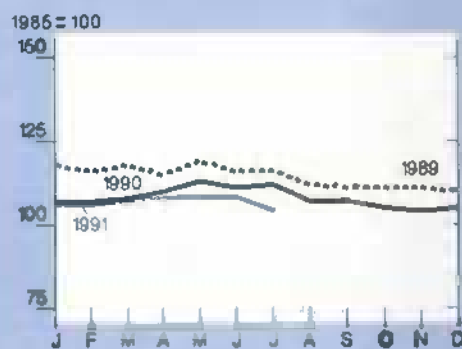
U.S. wheat exports



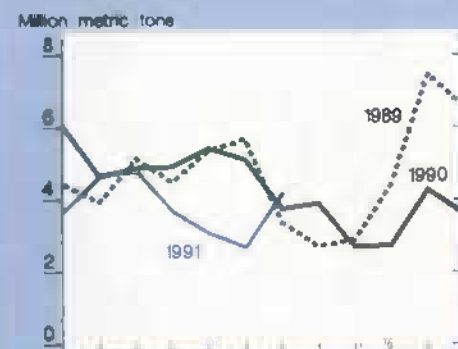
Export volume



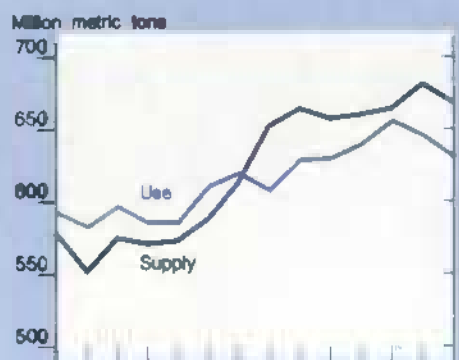
Index of export prices



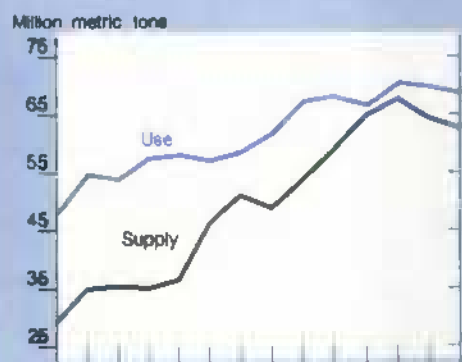
U.S. corn exports



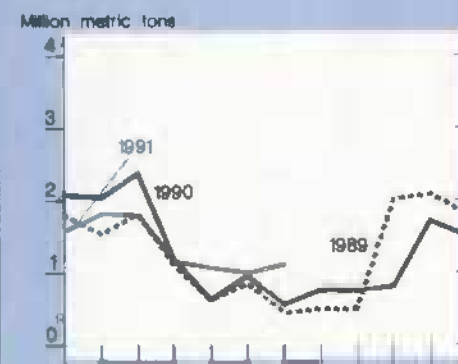
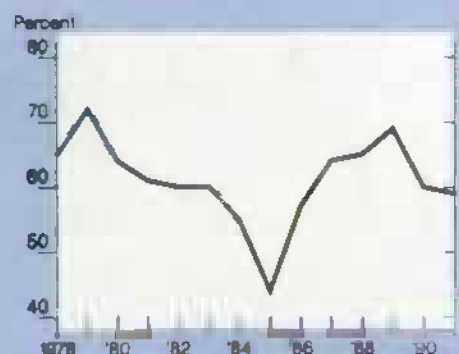
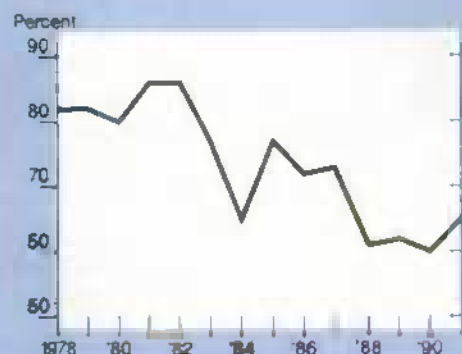
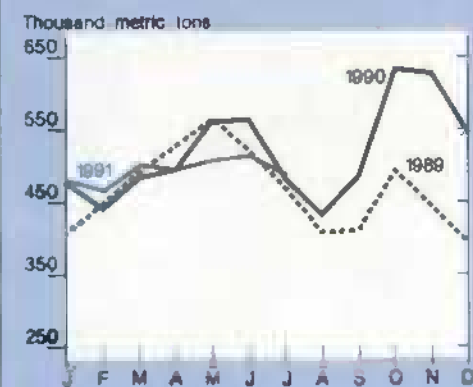
Foreign supply & use of coarse grains



Foreign supply & use of soybeans



U.S. soybean exports

U.S. share of world coarse grains exports^{1,2}U.S. share of world soybean exports^{1,2}U.S. fruit & vegetable exports³¹Excluding intra-EC trade. ²October-September years. ³Includes fruit juices.

EC Adopts Oilseed Reform

On October 22, the EC Council of Agriculture Ministers approved a new oilseed support system. The new regime will provide support through a payment based on planted area paid directly to producers. Under the current regime, subsidies to crushers encourage the purchase of high-priced EC oilseeds in place of cheaper imported products. The new payment formula, which must be approved by the European Parliament, will affect oilseed crops harvested in 1992.

The oilseed reform became necessary because of a ruling by the General Agreement on Tariffs and Trade (GATT) that resulted from a complaint filed by the U.S. in 1988. The GATT panel determined that the EC's oilseeds policy violated GATT rules by discriminating against imported oilseeds and undercutting the benefits to the U.S. from tariff concessions.

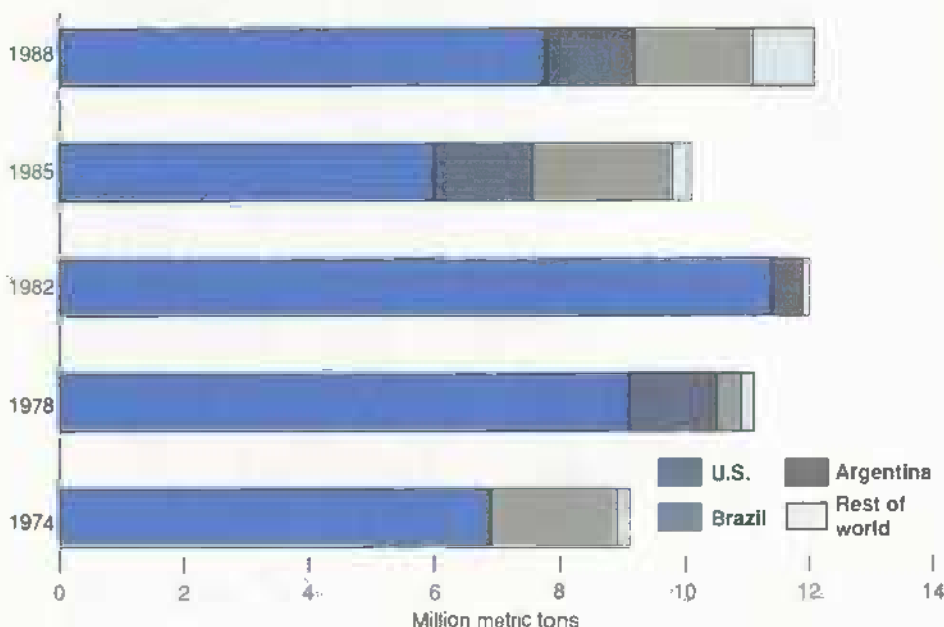
The introduction of large subsidies had negated the benefits of tariff reductions, since the subsidies—which allowed processors to pay high prices to producers—completely insulated producers from changes in world prices. The panel found that subsidy payments to processors were greater than the difference between the EC producer price and world market prices. Reduced import duties could not affect the competitive relationship between domestic and imported oilseeds under these circumstances.

EC production of oilseeds—rapeseed, sunflowerseed, and soybeans—increased tenfold during the 1980's in response to high support prices. Over the same period, the volume of EC soybean and soybean meal imports declined, as did the U.S. share of the EC market.

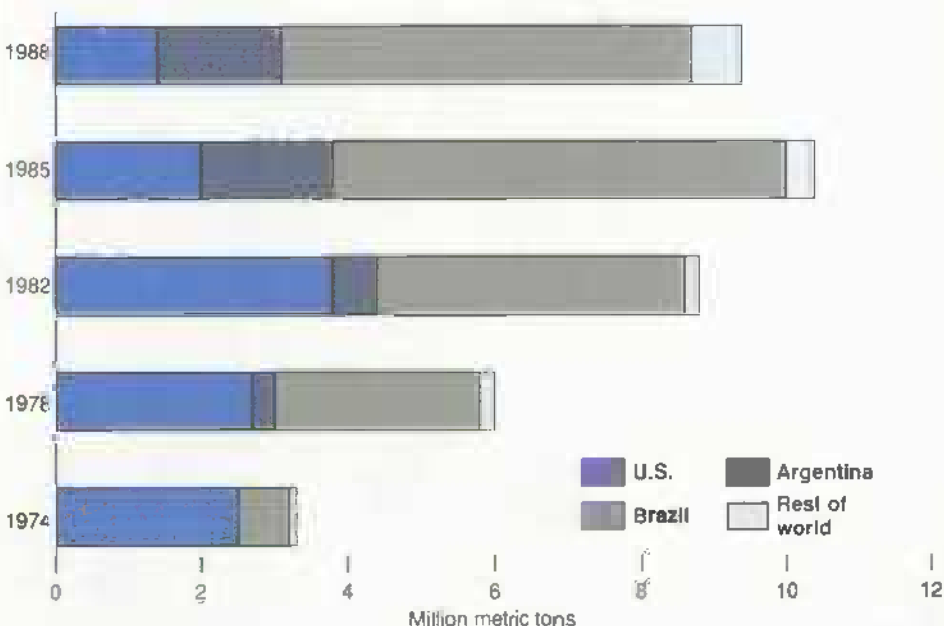
New System Allows Price Transmission

Under the reform, EC oilseed producers will be exposed to some market price changes. However, the acreage payment, which varies inversely with the world

U.S. Soybean Exports to EC Begin Recovering...



...But U.S. Soybean Meal Exports Continue to Fall



Source: Eurostat.

price, will protect producer income from world price declines. Since the direct payment is based on acreage planted to oilseeds, support is still linked to oilseed production.

The new regime will apply to the oilseed crop (rapeseed, soybeans, and sunflowerseed) harvested in 1992, including rapeseed planted in the fall of 1991. The plan will be reviewed after 1 year.

Resources

The following are among the main features:

- Support will be provided directly to oilseed producers in the form of a per-hectare payment. The current system of payments made to oilseed processors and passed on to producers in the form of a higher price will be discontinued.
- Payments will be based on the average oilseed yield for the Community, but adjusted to reflect regional differences in either grain or oilseed yields. The basic payment in a region with average yields will be 384 ECU/hectare (\$499 per hectare, or \$202 per acre).
- Payments will be adjusted to reflect movements in world market price. For example, if the world price exceeds a fixed reference price (of 163 ECU or \$212 per ton) by more than 8 percent, the payment will be reduced. Conversely, a drop in the world market price to more than 8 percent below the reference price will result in a higher payment.
- Similar acreage payment and reference prices will apply for all oilseeds.
- Eligibility will be limited to arable land or land previously fallowed under a set-aside program.
- A maximum guaranteed area (MGA) will be established for oilseeds. The per-hectare payment will be reduced by 1 percent for each percent of planted acreage exceeding the MGA.

The rapeseed MGA is equal to rapeseed acreage in 1991, a year in which acreage reached record highs. Based on USDA estimates of EC area planted, the soybean MGA is about 90 percent of 1991 acreage. The sunflowerseed MGA is about 115 percent of 1991 area.

[Mary Anne Normile and Mary Lisa Madell (202) 219-0610] **AO**



New Wetland Definition Debated

In the popular image, wetlands are sun-glinted shallows with cattails swaying and ducks alighting to a splashy landing. Jurisdictional wetlands defined for Federal regulatory and farm programs don't always mirror the popular image. But neither do they conform with the notion of wetlands held by farmers, developers, and other affected landowners.

In August 1991, revisions were announced for the "Federal Interagency Manual for Wetland Identification and Delineation of Wetlands," a multi-agency product created in 1989 that defines wetlands. Further changes to the definition of wetlands could be forthcoming as the Clean Water Act is considered for reauthorization this year.

Dissatisfaction with the 1989 manual by farm groups and affected landowners led to the recent proposals. The American Farm Bureau Federation, for example, criticized the definition contained in the 1989 manual as "too broad and results in large amounts of land regulated that...do not have any wetlands values or functions." On the other hand, the National

Wildlife Federation says that the proposed changes would constitute "...wiping out with one stroke thousands of critically important seasonal and transitional wetlands."

At issue is the amount and duration of flooding needed to define land as wetland. The 1989 manual defined wetland as land that was saturated within 18 inches of the surface for 7 days during the growing season. A compromise was offered in early August by Vice President Quayle, chairman of the President's Council on Competitiveness. It would require land to be inundated at least 15 consecutive days during the growing season or saturated to the surface for at least 21 consecutive days to be considered wetland. The burden of proof regarding the degree of flooding is on the government, not the landowner.

This definition, the basis of the proposed revisions, would remove millions of acres from Federal wetland protection programs. In return for reducing the scope of wetlands protected based on proposed changes to the manual, the Administration would request funding for all 1 million acres authorized in the new Wetland Reserve Program (WRP). USDA originally planned to enroll only 600,000 acres in the WRP.

Agencies and affected interest groups are now assessing procedures to determine further changes that might be needed. Public comments on the proposed manual revisions will be accepted by the Environmental Protection Agency (EPA) until mid-December.

Farmers Affected by Section 404 & Swampbuster

The revised manual will directly affect dredge-and-fill activities in wetlands regulated under Section 404 of the Clean Water Act. Section 404, administered by the Army Corps of Engineers and the EPA, requires landowners, including farmers, to obtain a permit before engaging in activities that could destroy wetlands. Farmers will need Section 404 permits on fewer acres under the revised delineation manual.

Wetlands subject to Swampbuster will probably also be affected. The Swampbuster provision, included in the Food Security Act of 1985, denies a wide range of farm program benefits to

farmers who convert wetlands for crop production after 1985.

USDA never formally adopted the wetland delineation manual in applying Swampbuster, but has relied instead on a 1987 definition based on hydric soil conditions, a definition similar to the one adopted in the 1989 manual.

Under the 1990 farm act, USDA is required to prepare wetland delineation maps and certifications of wetland determinations for program benefit eligibility under Swampbuster. While changes to the current definition are possible, exactly how procedures would be altered in response to the new manual is not yet certain.

Wetland Definition Has Evolved

Controversy over wetland definitions has a long history. In theory, farmland as well as other lands have been subject to Section 404 dredge-and-fill permit requirements since 1972, when the Federal Water Pollution Control Act amendments were passed. The Section 404 program was reauthorized and refined in 1977 and 1987.

Some farmers who were engaged in extensive land clearing and drainage were required to get 404 permits, and some permits were denied. But "normal agricultural... activities" on land cleared for agriculture were exempted from permit requirements from the beginning by the provisions of Section 404. A 1988 General Accounting Office report found that agricultural activity was generally unaffected by Federal wetland regulation.

Activities that are exempt from Section 404 requirements do not require notification or application for a permit. These include plowing, seeding, cultivating, and harvesting in agricultural wetlands.

The exempted activities must be part of an ongoing farming operation, and cannot be associated with bringing a wetland into agricultural production or converting an agricultural wetland to a nonwetland use. The activities can be conducted on prior converted wetlands, farmed wet-

lands, and unaltered wetlands under natural conditions.

In applying Swampbuster (since 1987), USDA has defined wetlands using two criteria: hydric soils and hydrophytic vegetation. Soils formed under saturated conditions (hydric soils) that are undrained, inadequately drained, or are seasonally wet long enough to support plants normally found in wetlands (hydrophytic vegetation) are wetlands, even if the plants have been removed.

Two kinds of land are subject to Swampbuster provisions. Natural wetlands are those that have not been cleared and drained to any appreciable degree, including wetlands that could be farmed most years under natural conditions. "Farmed wetlands" have been cleared, drained, or otherwise manipulated to make cropping possible, but may still meet the wetland definition. "Prior converted" wetlands—not subject to Swampbuster—are prior wetlands that were converted for other uses before 1985 and no longer meet the wetland definition.

The prairie potholes on the Northern Plains are an example of farmed wetlands, shallow depressions of glacial origin that collect snowmelt and spring runoff but are dry enough to plant wheat in most years. Criteria for hydrology in the revised delineation manual would probably eliminate many prairie potholes as wetlands. However, the revisions include them as specific exceptions that need not show independent evidence of meeting one of the three criteria, so they remain wetlands under the new definition.

Another example of farmed wetland is bottomland fields in the lower Mississippi alluvial plain that flood over winter but are dry in time for spring plantings of soybeans or other crops. Swampbuster provisions allow continued farming of these wetlands. However, a landowner who further drained or otherwise altered the hydrology to plant a crop would lose farm program benefits.

A Chronology of Wetland Definitions

- 1972** Section 404 of the Federal Water Pollution Control Act amendments is passed. Normal agricultural activities as defined in Section 404 are exempt.
- 1985** Swampbuster provision of the Food Security Act is passed.
- 1987** Regulations for Swampbuster issued by USDA contain a hydric soil-based definition that differs from previous definitions used by the Fish and Wildlife Service, Army Corps of Engineers, and the Environmental Protection Agency.
- 1989** The four Federal agencies agree to a consistent definition, based on hydric soils, hydrophytic vegetation, and hydrology, and published in a delineation manual.
- 1990** Problems over the definition arise. In May, the Corps issues a clarification of activities considered exempt and defined as "normal farming activities." The Corps initiates a technical review committee from the four agencies to revise the delineation manual. In July, changes to the Swampbuster wetland definition are proposed and defeated in debate over the 1990 farm bill.
- 1991** A bill is introduced in March to change the definition of wetlands and the administration of Section 404. This legislation may be considered when the Clean Water Act comes up for reauthorization in 1992. In August, revisions to the delineation manual are announced and put out for public comment.

Resources

While farmed wetlands are not pristine natural ecosystems, they do continue to perform valuable natural functions. For example, farmed wetlands provide important waterfowl wintering, feeding, and nesting areas, as well as nursery areas for fish and the invertebrates they feed upon. Such wetlands also play a role in flood control and the filtration of pollutants.

Swampbuster Led to 1989 Delineation Manual

In 1984, the Office of Technology Assessment found that definitions used in wetland programs and data collection were not consistent, a finding reiterated in 1988 by the National Wetlands Policy Forum. Faced with concerns over differing definitions, the four agencies with primary wetlands responsibilities—the Army Corps of Engineers (Corps), EPA, Fish and Wildlife Service (FWS), and USDA—adopted the soils-vegetation-hydrology approach in the 1989 manual.

As a result, new dredging and filling on a considerably larger amount of farmland, previously not defined as wetlands by the Corps, now came under its jurisdiction. Dissatisfaction with the 1989 manual soon arose. At first, some Corps field staff did not distinguish between prior converted wetlands and farmed wetlands defined in Swampbuster. Complaints from farmers prompted the Corps leadership to clarify the manual's three-part definition, and staff was directed not to determine hydrology solely on the basis of hydric soil characteristics.

Finally, in a memorandum issued in May 1990, the Corps reiterated that normal practices are exempt from Section 404. These actions completed a movement toward more consistent Federal wetland policy because both Swampbuster and Section 404 were now using similar wetland definitions, but the actions still did not eliminate dissatisfaction of some groups.

How Many Acres Of Wetlands?

There is no reliable estimate of total farmland acreage subject to

Wetlands—Long History, Changing Attitudes

Wetlands are important resources, and in their natural state provide public benefits, but they provide no benefit to the landowner unless the wetland is developed. Publicly perceived values of wetlands in North America have increased rapidly over the past two decades. But until recently, the public often underestimated the value of environmental, ecological, and recreational benefits provided by wetlands compared with returns from converting wetlands to other land uses.

For the first 200 years of U.S. history, the American people and the government approved and assisted drainage of wetlands to promote public health and economic development:

- Between 1780 and 1980, more than half of the original 221 million acres of continental U.S. wetlands were drained and converted to other uses.
- Between 1849 and 1860, the Swampland Acts granted almost 65 million acres of wetland to 15 states, on condition that proceeds of wetlands sold to individuals be used for reclamation projects for development.
- For the first 70 years of this century, Federal financial and technical assistance was provided to the farm community for wetland drainage.

Flood control, navigation, and highway projects also contributed to agricultural drainage by providing drainage outlets. While Federal aid for these activities was not solely responsible for wetland drainage, it did provide positive economic incentives.

Most direct incentives ended in the 1970's, culminating in a 1977 executive order to Federal agencies to minimize the destruction, loss, or degradation of wetlands, and to avoid support of new construction in wetlands whenever there was a practical alternative.

Farmers' freedom to convert wetlands has been increasingly constrained over the past two decades as public attitudes toward wetlands changed. Between the mid-1950's and mid-1970's, agricultural uses accounted for an estimated 87 percent of the nearly 14 million acres of wetlands converted—a total average annual loss of 458,000 acres. Conversion estimates for the mid-1970's to mid-1980's put the annual rate of loss at 290,000 acres, with agriculture accounting for only 54 percent of the total.

Losses have slowed even more since then. Between 1982 and 1987, losses were estimated at about 124,000 acres annually, with agriculture accounting for about 35 percent.

Swampbuster and Section 404, although available data can give some indication of limits. According to the 1987 National Resources Inventory (NRI), rural non-federal wetlands amounted to 83.2 million acres in 1982. These wetlands, known as "Circular 39" wetlands, are identified by an older definition based primarily on hydrology, used by the FWS.

All of these wetlands are subject to Swampbuster provisions, but only 7 percent (5.7 million acres) was rated by USDA's Soil Conservation Service as having high or medium potential for conversion to cropland. Another 4.7 million

acres of Circular 39 wetlands was used for crop production, but still classified as wetlands.

In addition to land inventoried as wetland, 53 million acres of cropland on hydric soils can be identified from the NRI. More than half of this land (30 million acres) had no drainage. About half of that (17.9 million acres) required drainage or other conservation practices for improved crop production. The remaining land was drained to some degree, but 4.5 million acres was not adequately drained for optimal crop production.

So, conservatively, as little as 32.8 million acres of cropland might be wetlands subject to Swampbuster, including cropped Circular 39 wetlands with high and medium potential for conversion, undrained hydric cropland that needs drainage for farming, and inadequately drained hydric cropland. There may be as much as 75 million acres of hydric soils in noncropland uses that would also be subject to Swampbuster if converted to cropland. Further adjustment in farmland estimates is needed because only 85 percent of rural nonfederal wetlands are privately owned, and the proportion of privately owned wetlands actually owned by farmers is not known.

Further Changes May Be Coming

Congress has responded to concerns raised by implementation of the delineation manual. In addition to the proposed changes announced in the 1989 delineation manual, legislation may be offered as part of the Clean Water Act reauthorization. The proposed legislation would amend Section 404 by restricting the official wetland definition, treating different classes of wetlands differently, and requiring Federal compensation for development restrictions on some classes of wetlands. Environmentalists oppose changes to Section 404, claiming that protection will be removed from large areas of wetlands if definition changes proposed to Section 404 are adopted.

The 1990 farm act established a new Wetland Reserve Program (WRP) to restore wetlands converted to cropland before 1985 to their former wetland status. USDA requested \$124 million for restoration and permanent easements on 150,000 acres of cropped, prior converted wetlands in fiscal 1992. Initially, no funding for the WRP was included in the House agriculture appropriations bill for fiscal 1992. The Senate included approximately \$91 million for 98,000 acres, but the House-Senate conference committee approved \$46 million for 50,000 acres. The Administration will now request funding for all 1 million acres of the WRP over the next 4 years.

The WRP will be run somewhat like the Conservation Reserve Program (CRP), with signup periods during which landowners can bid land into the program. However, legal requirements for compensating and recording permanent easements mean that more negotiation with landowners will be required before bids are accepted. Because of lack of detailed information on wetlands and restoration potential, and the desire for wetland diversity, USDA will probably have regional enrollment pools for WRP, rather than the single national pool now being used in CRP enrollment.

WRP will put the highest priority on restoring prior converted wetlands. As a consequence, cropped wetlands formerly eligible for CRP enrollment are no longer eligible, and owners of farmed wetlands and wetlands that can be farmed under natural conditions may have fewer options for their land than previously.

"No Net Loss" Goal

In his 1990 budget message to Congress, President Bush set a policy goal of "no net loss" of wetlands, and established a task force under the White House Domestic Policy Council to determine how to achieve the goal. Meanwhile, Section 404, Swampbuster, and tax reform provisions may have reduced wetland conversion more substantially than ever.

Recent estimates of annual wetland losses (both natural and manmade) range from 124,000 to 290,000 acres, considerably lower than the 450,000 acres per year estimated for the 1950's to 1970's. Agriculture's share of wetland drainage has shrunk from 87 percent in the 1960's and 1970's to 54 percent in the early 1980's, and only 35 percent in the mid-1980's.

The WRP is one of the few tangible steps taken toward "no net loss." Revision of the 1989 delineation manual to restrict the scope of jurisdictional wetlands would make the "no net loss" goal easier to achieve, despite the fact that the new manual would be harder to apply.

The controversy over Federal wetland regulation suggests that voluntary approaches with compensation may be desirable. However, continued tight Federal budgets could limit the effectiveness of wetland protection programs. [Ralph Heimlich (202) 219-0422] AO

Flex Acres & Cropland Use

The 1990 farm legislation initiated a "maximum payment acreage," limiting program participants' deficiency payments to 85 percent of the base acreage established for their program crop, minus any acreage reduction requirement. The remaining 15 percent of base acres, for which no deficiency payments will be made, are called "normal flex acres." Normal flex acres can be planted to the original program crop, another program crop, or an approved flex crop.

The Budget Reconciliation Act of 1990, which amended the 1990 farm bill, eliminated deficiency payments on the "normal flex acres." Base acreage, however, would be retained in the program crop if the land use was flexed to approved alternative crops.

In addition to normal flex acres, an additional 10 percent of program crop base acres can be used as "optional flex acres." Optional flex acres can be planted to another crop without losing base acreage, but if flexed, these acres are also not eligible for deficiency payments. However, program crops and oilseeds grown on both types of flexed acres may be eligible for price support loans.

Some crops specifically excluded from production on flexed acres are fruits and vegetables, including potatoes, dry edible beans, lentils, and peas. Other crops may be excluded at the discretion of the Secretary of Agriculture. Currently peanuts, tobacco, wild rice, nuts, trees, and tree crops are also excluded.

Resources

Oats and Rice Had Highest Proportions of Normal Flex Acres Shifted to Other Crops in 1991

	Corn	Sorghum	Barley	Oats	Wheat	Cotton	Rice	Total
<i>Thousand acres</i>								
Enrolled base acres of crop, 1991	63,615	10,405	8,724	2,793	67,568	12,293	3,963	169,363
Normal flex acres available ¹	-9,542 ²	-1,561	-1,309	-419	-4,690 ³	-1,844	-595	-19,960
1991 use of flexed acres:								
Flexed to other program crops	-438	-286	-169	-197	-682	-60	-63	-1,895
Flexed from other program crops	500	203	102	49	444	486	21	1,804
Flexed to nonprogram crops:								
Soybeans	-2,376	-308	-210	-81	-826	-171	-246	-4,220
Minor oilseeds	-65	-18	-67	-18	-210	-16	-9	-404
Other nonprogram crops	-259	-82	-136	-38	-389	-55	-60	-1,019
Net total acres flexed	-2,638	-492	-480	-286	-1,664	183	-358	-5,733
<i>Percent</i>								
Gross flex acres as a percentage of normal flex acres ⁴	33	45	44	80	45	16	64	38
Net flex acres as a percentage of enrolled base acres ⁵	-4	-5	-6	-10	-2	1	-9	-3

¹ Normal flex acres were computed as 15 percent of enrolled base acres of the program crops. Optional flex acres could be up to an additional two-thirds of the normal flex acres (10 percent of enrolled base acres). ² A negative number indicates the area flexed from the crop heading the column into another crop. ³ Excludes 36,302,287 acres of wheat base enrolled under the Winter Wheat Option. ⁴ Acreage flexed out of each program crop, divided by the normal flex acres, multiplied by 100 (excludes acreage flexed into each program crop from other program crops). ⁵ Net change in acres due to crop base flex provisions, divided by enrolled base acres of the crop, multiplied by 100.

Source: ASCS 1991 Enrollment Report.

Crop-to-Crop Shifting Was Low

Based on program crop enrollment in 1991 (excluding wheat base enrolled under the winter wheat option), normal flex acres would comprise nearly 20 million acres. An additional 13 million could have been optionally flexed.

Of the 33 million acres that could have been flexed in 1991, according to the 1991 ASCS enrollment report, only about 7.5 million acres moved out of the original program crops—called gross flexed acreage. This probably indicates that a high proportion of normal flex acres is planted to the original program crop and that the optional flex acres provision was little used. The net flex acres, after land shifted among program crops is subtracted, amount to a little more than 5.7 million.

In total, including land flexed into nonprogram crops, corn lost about 3.1 million acres, most of which was flexed to soybeans. Corn lost about 438,000 of the 3.1 million acres to other program crops, but gained about 500,000 acres

flexed from other program crops for a net flex reduction of 2.6 million acres.

Among program crops, only corn and cotton gained larger areas from other program crops than they lost to program crops from flexed acres. Cotton was the only program crop that netted an increase—about 183,000 acres—as a result of flex acreage movements. Of the more than 5.7 million net acres flexed from all program crops in 1991, soybeans gained approximately 75 percent.

In comparing the reported gross flex—acreage moving out of program crops—to the normal flex acres available, cotton lost the least—16 percent—followed by corn—33 percent. Oats lost the most—80 percent of acres available for normal flexing out of the oats program base moved to other program or nonprogram crops.

The relatively low shifts among crops through the acreage flex provisions suggest that producers' preferred crop rotations have not been constrained by past base acreage provisions. In the case of wheat, many producers likely are already producing their best alternative.

However, other reasons for the relatively low rate of flexing might be the late passage of the 1990 farm bill, the winter wheat option, and lack of experience with flex provisions. Participation in 1992 will likely be a better indicator of how producers will exercise planting options provided under the flex provisions of the farm programs.

Cropland Use Continues Below 5-Year Average

A total of 338 million acres of cropland was used for crops in 1991, 3 million less than last year and below the average of the last 5 years. Land used for crops includes acres harvested, failed, and summer fallowed. Cropland use in 1992 is likely to be higher, due to reduced set-aside requirements for wheat and feed grains.

U.S. cropland peaked at 387 million in 1981, after increasing to meet expanding export markets in the 1970's. Most of the reduction in cropland use during the 1980's reflects land idled under annual and long-term (Conservation Reserve Program) acreage reduction programs.

No land was idled under farm programs in 1981 and only a small amount in 1982. But in 1991, producers idled over 63 million acres in annual programs and the Conservation Reserve Program (CRP)—about 13 percent of U.S. cropland, equivalent to about a third of total arable land in the European Community.

Total cropland—idled land plus land used for crops—amounted to nearly 402 million acres in 1991. This is 1 percent below the 414-million-acre average of 1986-90, but 10 percent above the low of 364 million acres in 1974.

Most Regions Report No Acreage Change

Cropland used for crops in 1991 was lower or unchanged in every region of the U.S. except two. The Corn Belt reported an increase of 0.7 million acres over 1990, and the Lake States reported a gain of 0.4 million acres. The Corn Belt was estimated to have less crop failure in 1991 than last year, while the Lake States reported no change. Crop acreage increases in both regions were primarily corn and soybeans, but small increases in barley and cotton were also reported.

Cropland idled under annual commodity programs increased 4 percent in 1991 to

28.8 million acres. A large increase in idled wheat base, due to a 15-percent acreage reduction requirement in 1991, accounted for most of the change. Idled oats base also increased in 1991, due to producer participation in the 0/92 program. Fewer acres were idled in 1991 among each of the other program crops, primarily due to reduced acreage reduction requirements, with about the same area enrolled in 1991 annual programs as in 1990.

The 63.3 million acres idled under all Federal programs in 1991 was the third-smallest area set aside since 1986. However, the area has increased annually since 1989. The 10-year Conservation Reserve Program rose 0.6 million acres in 1991 to 34.5 million acres; 0.3 million of these were base acres of program crops.

Looking ahead, more than 1.1 million acres of the almost 2.4 million acres bid in the 11th CRP signup in July have been tentatively accepted for the CRP in 1992. The next CRP signup opportunity will be in June 1992 for enrollment beginning in 1993. [Arthur Daugherty (202) 219-0422] **AO**

Cropland Used for Crops Continues Below Average

Region	1982	Average 1986-90	1991 ¹	Change 1982 to 1991
<i>Million acres</i>				
Cropland used for crops:				
Northeast	13.6	11.8	11.2	-2.4
Lake States	39.8	34.0	34.7	-5.1
Corn Belt	86.5	78.6	80.7	-5.8
No. Plains	93.7	87.9	88.7	-5.0
Appalachian	19.3	16.6	16.6	-2.7
Southeast	14.7	10.6	10.1	-4.6
Delta States	19.2	15.7	15.4	-3.8
So. Plains	36.9	30.1	29.7	-7.2
Mountain	37.4	35.1	33.4	-4.0
Pacific ²	21.5	18.9	18.0	-3.5
U.S.²	382.6	339.2	338.5	-44.1
Cropland idled:³				
Northeast	0.1	0.7	0.6	0.5
Lake States	0.7	5.4	4.6	3.9
Corn Belt	1.2	11.1	8.2	7.0
No. Plains	3.6	17.5	18.3	14.7
Appalachian	0.1	2.3	2.0	1.9
Southeast	0.2	2.7	2.9	2.7
Delta	0.6	2.9	2.4	1.8
So. Plains	2.3	10.4	10.6	8.3
Mountain	1.7	8.6	10.3	8.6
Pacific	0.6	3.2	3.4	2.8
U.S.⁴	11.1	64.8	63.3	52.2

¹ Preliminary. ² Excludes Alaska and Hawaii. ³ Idled under annual acreage reduction programs, and includes an average of 21.2 million acres in the Conservation Reserve Program during 1986-90 and 34.5 million acres under contract in 1991. ⁴ Total includes an average of 7.7 million nonbase acres bid into the CRP during 1986-90 and 12.4 million in 1991.

Special Articles



Central Europe: Agriculture in the New Market Economies

The changes taking place in the Central and East European countries (CEE's) are remarkable not only for their scope, but also because few guideposts exist on transforming an economy managed by planners into one driven by markets. In a two-part series, AO looks at the transition to market-oriented agriculture in the seven countries that make up the region—their problems, challenges, and prospects.

Part I provides a brief overview and outlook for the region and a closer look at three countries in the forefront of change—Poland, Hungary, and Czechoslovakia. Part II examines developments in Albania, Bulgaria, Romania, and Yugoslavia.

Small Area, Large Market Potential

Geographically, the CEE's are not large countries. Their total land area is about 280 million acres, compared with nearly 2.3 billion acres in the U.S. The area of the seven CEE's together approaches the combined size of Texas, New Mexico, and Arizona.

But the region is densely populated, with 130 million inhabitants. While incomes in the CEE's are well above those of many developing economies, they nevertheless fall far short of the incomes of other industrialized nations. Per capita incomes in 1990 ranged from less than \$1,200 in Albania to \$7,500 in Czechoslovakia. In 1990, Gross National Product (GNP) of the CEE's totaled approximately \$590 billion altogether, compared with the Soviet Union's GNP estimated at \$1.7 trillion.

In spite of current low incomes, and the hurdles these countries face as they move into market economies, several factors point to favorable growth prospects for the CEE's. Although agricultural productivity is low by Western standards, due to poor technology, resource use, and management practices, the region has extensive natural resources. Improvements in input quality would therefore boost productivity considerably. The region's most valuable asset is the labor force—relatively well educated, trained, and specialized. And the CEE's are well located for conducting trade with Western Europe, the Soviet Union, and the Middle East.

Poland—the Largest Economy

In area and population, Poland is the largest country in Central and Eastern Europe. With 75 million acres, Poland is about the size of New Mexico or Arizona. Its population of almost 40 million residents, however, is more than 10 times Arizona's, and about a third larger than that of California, the most heavily populated state.

Poland's GNP is the largest of any of the CEE countries, though still only \$150 billion in 1990, about the same as the state of New Jersey. A fifth of its people work in agriculture, making it the second-most-agrarian country in the region, after Albania. Prior to reforms, Poland's agricultural sector generated 12 percent of GNP. In 1990, agriculture's contribution to Poland's GNP was 30 percent.

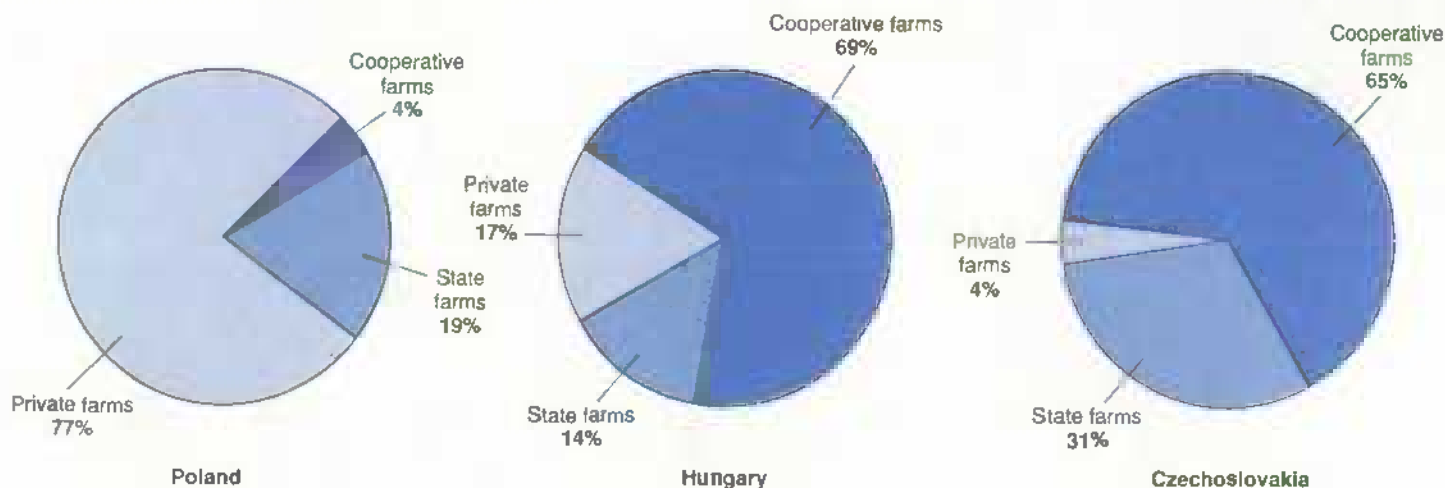
Forty percent of Poland's population is rural, dispersed among 42,000 villages in more than 2,100 counties. Although electricity is available in nearly every village, only a third of

Grain Remains a Principal Crop in CEE Countries¹

	Poland	Hungary	Czechoslovakia
1,000 metric tons			
Wheat	9,000	5,900	6,500
Corn	250	6,650	880
Barley	4,217	1,550	3,550
Rye	8,450	223	650
Total grains	27,412	14,483	11,980
Oilseeds	1,128	846	499
Meat & poultry	3,008	1,438	1,505
Potatoes ²	34,400	819	3,167
Sugar	1,900	500	700
Fruits & vegetables ²	6,993	3,524	1,811

¹ 1990 output. ² Production in 1989, from Country Yearbooks, 1990.
Source: USDA.

Most Farms in Poland Were Never Collectivized



Structure of land ownership, 1989.

the villages have central water supplies, and only 8 percent have telephones.

Almost half of Poland's land area is arable, compared with 10 percent in the Soviet Union, 20 percent in the U.S., and 30 percent in the European Community (EC). This is partly because the northern two-thirds of Poland is very flat. Nonetheless, since most of the land is sandy and acidic, and has low fertility, crop yields tend to be near the lowest of the CEE's.

Poland lies entirely above the 50th parallel—its southernmost point is level with Winnipeg, Canada—so the growing season is short and cool, further reducing yields and limiting the crops that can be grown successfully.

Unlike most other CEE's, where state and cooperative/collective ownership dominated, private ownership has been widespread in Poland's agricultural sector throughout the period of communist rule. Over 75 percent of agricultural land is located on 2.7 million private farms. A large agrarian labor force and numerous farms have led to a "miniaturization" of agriculture characterized by small farm size and intensive cultivation.

Poland has one of the highest labor-to-land ratios of the CEE countries: 119 workers per 1,000 acres. For the entire region (excluding Albania), the labor-land ratio is nearly 10 workers. The U.S. ratio is less than 4 workers per 1,000 acres.

The average private farm in Poland is only about 15 acres, compared with the U.S. average of 455 acres. Half are less than 12 acres, while only 1 percent are larger than 25 acres. Most private farms are family-owned and -operated. Private farms in Poland are cultivated more intensively than socialized farms, which are the dominant type of farm in other CEE's.

In 1990, Poland's arable cropland was planted mainly to grains—21 million acres—followed by potatoes, 5 million acres; corn silage and hay, 5 million; rapeseed, 1.5 million; and sugarbeets, 1 million. Rye is the most widely planted grain, with 35 percent of grain area, but wheat (20 percent), barley (15 percent), and oats (10 percent) are also important.

Coarse grain yields average 49 bushels per acre, food grain yields average 58 bushels, and oilseed yields about 35 bushels per acre. While grain yields are low, oilseed yields are generally among the highest in the CEE region and comparable to yields in the U.S. and the EC.

Although the issues of land reform and privatization face all the CEE's, the focus of agricultural debate in Poland is the suboptimal size of most farms. Many observers claim that the small size of farms in Poland makes them inefficient, and hope that market forces will reduce the number of marginal farmers and spur consolidation to more efficient-sized farms.

In addition to the problem of miniaturization, Polish farmers face a marketing and processing system that is concentrated among a small number of state enterprises. In the past, these enterprises operated government-sanctioned input supply monopolies and procurement and purchasing monopsonies to discourage private retail and wholesale marketing operations. However, monopoly power was rarely exercised. More often, producers benefited from farm subsidies.

Even with rescission of official monopoly status in the recent reforms, however, price reform and subsidy removal have actually allowed the marketing and processing sector to exercise

Special Articles

Land Reform: A Key to Market Orientation

Each of the Central and East European countries is wrestling with the issue of land reform and privatization—converting state-owned land and resources to private ownership.

In mid-1990, Poland designated as communal property a significant amount of the 23 percent of land held by cooperative and state farms. Some remaining state farms will be privatized under legislation passed in July 1990.

Under this legislation, enterprises selected by the new Ministry of Enterprise Transformation will be converted to joint stock companies, and their shares sold. Other enterprises will be auctioned off or sold directly to individual buyers. Workers will be permitted to buy up to 20 percent of the shares of their enterprise at half price. Coupons to purchase shares will also be distributed among the population.

State farms are to be treated like any other state enterprise, with shares offered for sale. There has been no discussion of returning land to former owners.

In Hungary, land reform is an integral part of the national defense, planted to perennial crops, or turned into mineral extraction areas, national parks, or memorials. Instead, compensation will be paid for these areas.

Land will be returned through a system of vouchers issued in an amount that reflects the historic value of owners' landholdings. The vouchers can be redeemed for

land made available from a state land fund. New legislation to deal with land confiscated between May 1, 1939 and June 8, 1949 is expected in late 1991.

Czechoslovakia, like Hungary and Poland, is tackling land reform. The Federal Assembly passed legislation in late May 1991 to resolve the issue of reprivatization of land confiscated during the collectivization period. This "Law on the Revision of Ownership Relations to Land and Other Agricultural Property" applies to agricultural land and property nationalized between February 25, 1948 and January 1, 1990.

An estimated 3.5 million former owners or heirs have the right to claim land. The amount of land to be returned is estimated between 5.4 and 8.6 million acres.

Not all the land in collective and state farms (roughly 15 million acres) will be returned, because the maximum allowable claim is 370 acres. While many former owners' properties exceeded this limit, land in excess of the limit will remain with the collective or state farm. Land parcels cannot be reclaimed if they have been developed, set

With the return of the land to private ownership, agriculture is expected to gain a stronger foothold in the new free market economies, paving the way for more extensive private production.

considerable monopoly power. And even where more than one procurer or input supplier operates, competitive pricing is not yet practiced.

Thus, Polish farmers are currently caught in a squeeze—by input suppliers raising prices above previously subsidized levels, and by procurement enterprises keeping increases in prices paid to farmers below overall rates of inflation. Retail food prices have risen faster than wholesale agricultural prices, and processor and marketing margins have increased. Polish consumers spend a hefty 50 percent of their disposable incomes on food. But with a 30-percent contraction of personal income since the beginning of 1990, food demand has been under strong downward pressure.

Marketing and processing enterprises have tried to weather the contraction, usually by increasing profit margins, and to a lesser extent by reducing costs and expanding sales. The firms have been more successful in expanding exports of food products. In 1990, food product exports posted one of the most rapid growth rates of all sectors in the Polish economy. Food products now account for 22 percent of Polish exports.

Important export markets are the EC and other CEE's. Poland exports a large amount of rapeseed, berries, and mushrooms to the EC and three-quarters of the EC import quota of calves and lambs. Most other Polish food exports—grains, meat, field vegetables, and apples—go to Eastern markets. Still, exports account for only 10 percent of the agricultural commodities produced in Poland.

In addition to suffering from reduced sales to monopsonistic processors, Polish farmers face increased agricultural imports, especially subsidized imports from the EC. In response, farmers have lobbied for higher tariffs on imports. As of August 1, 1991, tariffs on farm produce imports were increased to a range of 25-35 percent.

The government also began a limited program of intervention procurement and farm credit subsidies. The Agency for Agricultural Marketing recently moved to support rye prices at \$0.85 per bushel, wheat at \$1.60, and pork slaughter animals at \$750 a ton. All of these prices are down from early 1991 levels, with pork falling the most.

In the 1991 national budget, the government designated over \$350 million for agricultural credit. Part of this fund is to modernize productive technology, especially water supply systems. A large part of the funding has already been used to purchase fertilizers and pesticides.

Hungary's Head Start

Nestled in the Carpathian Basin bordered by Austria, Czechoslovakia, Romania, Yugoslavia, and the Soviet republic of Ukraine, Hungary is emerging as an important economic force in the region, especially in agriculture. Hungary is a small country, about the size of Indiana, with 35,919 square miles. It has slightly fewer residents than the state of Ohio, with a total population of just over 10.5 million.

The terrain is hilly in the north and west, and flat in the east and southeast—known as the Alföld, or Great Plain. Two rivers flow through Hungary, the Danube and the Tisza. Both are heavily used for industry, irrigation, and transportation. Temperatures in Hungary vary widely, rainfall is uneven, and the east often suffers from drought. Average rainfall throughout Hungary is comparable to the level in Wichita, Kansas—about 25 inches annually.

For more than 20 years, Hungary pursued a more liberal economic program than its neighbors. In 1968, the New Economic Mechanism (NEM) implemented the transfer of economic power from the central authorities to individual enterprises. Factory managers were given more control and flexibility over production, investment, and price decisions. Agriculture enjoyed a period of prosperity and self-government.

As private agricultural enterprises thrived, critics claimed that the NEM was causing "the restoration of capitalism to the countryside." By 1973, the NEM had come under fierce attack, and the government reclaimed control of the decisionmaking process, and thus the economic life of Hungary. Still, a degree of economic freedom remained, especially in agriculture, where private production had achieved effective results. Today, the success of the Hungarian economy in carrying out reform and attracting more foreign investment than its Central and Eastern European neighbors is partly due to its more recent experience with similar liberal policies.

With few natural resources other than fertile soil and large rivers, agriculture has become a key component of the economy and its development. Of its 23 million acres, 13 million are considered arable, with nearly all of it (12 million acres) cultivated. The principal crops include wheat, corn, and barley—accounting for just over 6 million acres. Other production includes fodder crops, sunflowerseed, sugarbeets, fruits, and vegetables.

Grain yields are among the highest in the region and are comparable to or higher than those of Western Europe and the U.S. Average wheat yields are about 75 bushels per acre, more than twice the U.S. average; corn yields of 100 bushels per acre are about 20 percent below U.S. yields; and barley yields are 50 percent higher than in the U.S., at about 85 bushels per acre.

Hungary has three types of farm organization—private, cooperative, and state-owned. Although land reform will lead to changes in ownership, over 69 percent of agricultural land is presently on cooperative (collective) farms. These farms are very large, averaging 688 acres. State-owned farms hold 14 percent of the agricultural land, and their size is close to the U.S. average, at 395 acres. State and collective farms together have a labor-land ratio of nearly 53 workers per 1,000 acres, and one tractor for every 240 acres.

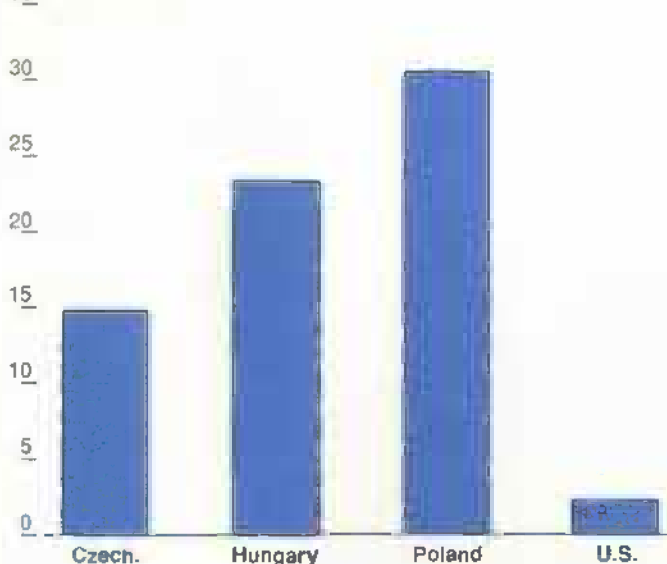
Private farms are the smallest, some no more than family-sized plots used mainly for personal consumption, but they are highly productive. Because of a concentration in production of high-value products, the 17 percent of agricultural land held by private farms produces 30 percent of Hungary's total agricultural output, over 50 percent of all fruits and vegetables, and in some years, 40-50 percent of pork and poultry.

Economic reform has been especially difficult for Hungarian consumers and farmers, for several reasons. Pre-reform consumer subsidies on some agricultural products stimulated artificially high consumption and the substitution of food purchases for other, more scarce goods. For example, despite a low per capita GNP in 1990 of \$5,800, Hungarian consumers eat more meat and poultry than any other CEE (except Czechoslovakia), and significantly more than many Western economies, including Italy and the United Kingdom.

When the consumer subsidies were eliminated, retail prices skyrocketed and led to an immediate contraction in demand for some foods, particularly meat and dairy products. Producers were slow to react to these shifts in consumption, creating a

Agriculture Is Relatively More Important in the Economies of Central Europe

Percent of 1990 GNP



Source: *Economic Report of the President*, 1991.

Special Articles

glut of milk and meat on the market. Instead of responding to declining domestic prices by lowering output, producers maintained production levels and hoped for government intervention, further exacerbating the problem.

Hungary's agricultural exports average approximately \$2 billion annually, supplying 30 percent of hard-currency earnings. Trade between Hungary and the Soviet Union, and other countries in Central Europe, collapsed in January 1991 when they shifted to trade on a strict hard-currency basis.

Since then, Hungary has scrambled to expand trade beyond its own backyard in a variety of ways. The Hungarian government (like the Polish and Czechoslovak governments) has been negotiating an agreement with the EC to lessen trade restrictions between the EC and Hungary. With a continued glut of meat, milk, and other dairy products, the government is using export subsidies varying from 25 to 35 percent for dairy products, pork, and poultry.

To export the excess grain resulting from an excellent harvest this year, loan guarantees are being offered to exporters. The government has also explored the possibility of diverting a portion of the food credits being offered by other countries to the Soviet Union to buy Hungarian grains.

Czechoslovakia: Farms That Stretch for Miles

Czechoslovakia is the size of New York state, located on the same latitude as the U.S.-Canadian border. Its population is about 16 million, roughly the same as Texas. Per capita GNP of \$7,500 in 1990 was the highest of any CEE, with a total GNP comparable to Massachusetts.

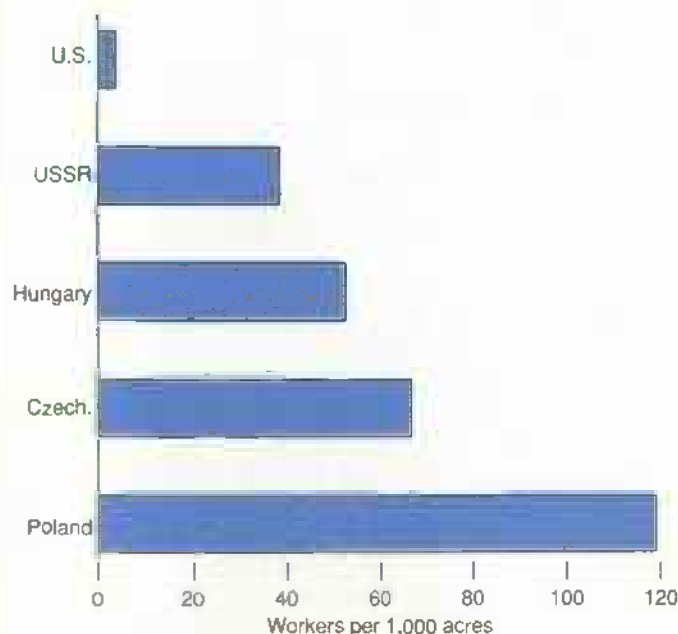
Czechoslovakia has two distinct climates. In the western regions of Bohemia and Moravia, a maritime weather pattern dominates, as in Western Europe or northern Pennsylvania. The eastern region of Slovakia, on the other hand, is influenced by the continental systems dominant in eastern Europe, with extreme temperatures, cold winters, and frequent droughts.

The major commodities produced are grains. Of 11 million acres of cropland, 6 million are used mainly to grow wheat and barley, with oats, corn, and rye accounting for about 10 percent of cropland acreage. Grain yields average about 80 bushels per acre. On the remaining 5 million acres, farmers plant sugarbeets, potatoes, and forage crops.

In land ownership, Czechoslovakia was an extreme example of socialized agriculture during the communist period. Most agricultural land has been held by large collective and state farms. Collective farms are still technically the property of the workers who take part in the farms' operations. On state farms, however, workers have no right to the land.

Both cooperative and state farms are extremely large by any standard. Cooperative farms average 6,000 acres, and the huge

Former Communist States Have More Farm Workers Per Acre than U.S.



state farms are almost four times larger, at 22,000 acres. To put this in perspective, a 22,000-acre farm is about 34 square miles, or a little more than half the size of the District of Columbia.

Like most other CEE's, before reform only a small proportion of agricultural land (4 percent, or 1.5 million acres) was privately held. Most of this private land was in the hilly regions of Slovakia where large mechanized farms were the least viable. Another half-million acres was distributed across the country in 1-2-acre subsistence plots.

Though private landholding in most CEE's represents only a small share of agricultural land, these farms usually produce an inordinately large share of agricultural output, particularly livestock products. This is not the case in Czechoslovakia, where privately held farms produce only 4 percent of gross agricultural output. The exception is fruit and vegetable production—half is produced by privately held farms.

Under central planning, both consumer and production subsidies were prevalent in Czechoslovakia. Annual food subsidies—mainly for meat and dairy products—ran as high as \$1.5 billion. But unlike other CEE's, food shortages and long lines were not a serious problem, because production subsidies of \$1 billion ensured available supplies to meet demand. Hence, per capita meat consumption in Czechoslovakia is the highest of any CEE, nearly 200 pounds per year.

In the emerging market economy, food prices have risen, income has deteriorated, and adequate food supplies have given way to product gluts. One of Czechoslovakia's most difficult challenges is to devise agricultural policies to bolster the

development of market forces while limiting the fall in demand for individual agricultural products.

In July 1990, food subsidies were completely abolished, and as a result, prices to consumers immediately rose 25 percent. At the beginning of 1991, most prices were freed, and for the first 6 months, food prices rose another 27 percent, with most of the increase coming in January. Price ceilings were maintained on some basic commodities such as flour, potatoes, sugar, pork, eggs, poultry, and milk. The prices of these products stabilized or declined during the late spring and early summer. As a result, price ceilings were recently abolished.

Overall, consumer price inflation in the economy was roughly 49 percent in the first half of 1991, so relative food prices have actually fallen 15 percent during that period. For all of 1991, food consumption is estimated to decline 25 percent. Deterioration in income is the main factor behind the fall in food consumption. In the first quarter of 1991, real wages in the agricultural sector fell 34 percent, and 24 percent in the rest of the economy.

Regulated producer prices are scheduled to cover only 6 percent of producer sales by October 1991. Roughly 30 percent of the total \$1 billion in output subsidies is directed to agricultural producers in 1991, down substantially from the 1990 level of \$900 million. To offset the decline in production subsidies, the government has introduced republic- and federal-level market regulation funds.

Market regulation funds provide budget authority for the government to purchase commodities to support farm prices. There was strong pressure early in 1991 to take such action, as the index of farm prices increased only 0.2 percent from December 1990 while inflation increased 40 percent. Beef prices had actually fallen 20 percent, and milk prices by 6 percent. Purchases of farm products by processors declined substantially—36 percent for beef, 20 percent for pigs, 18 percent for milk, and 26 percent for eggs. Thus, demand for farm inputs and farm machinery also declined significantly.

1991—the Turning Point?

Two years after the political and economic upheaval, some stability is returning to parts of Central and Eastern Europe. But although prospects for agricultural production in 1991 and 1992 look favorable, farm profitability will continue to be squeezed. In place of the command system that emphasized planned production targets with no adequate price mechanism, market forces are beginning to work.

Farmers throughout the region are starting to make production decisions based on expected profitability. They are starting to adjust production to the falling domestic and international demand for grains and meats. For example, in Poland, farmers are reportedly leaving some crops unharvested, as current prices will not cover the cost of harvesting and storage. Under central planning, crops were never left unharvested, unless their quality was extremely poor.

In 1992, there will likely be slight production declines in meats and grains, as farmers react to the excess supplies and subsequent low prices. Demand for grains and meats should stabilize in 1992. However, it is unlikely that the decrease in supply will match the decrease in demand that has already occurred, so surpluses will likely plague 1992.

Farmers' difficulties in adjusting to lower domestic demand were exacerbated by measures allowing imports—long denied under central planning—of specialty agricultural products, EC agricultural products of higher quality and better packaging than domestic goods, and various nonagricultural consumer goods. For the first time in years, the food sectors of these economies must aggressively compete for consumers' spending.

High production and falling demand combined to depress farm prices significantly throughout 1991. Planting intentions for grains still appear fairly high for the 1992 crop, though fortunately below 1991. Assuming normal weather during 1992, grain production should decline by about 5-10 percent.

Livestock inventories continue to decline, but low feed prices have eased the adjustment thus far. Given the lackluster demand, continued declines in animal numbers and livestock production are likely for 1992.

In some or all of the CEE's, efforts are underway to restore equilibrium in the agricultural markets. A continuing fall in demand for milk in Hungary has led government, producers, and processors to agree to a series of measures to regulate the market. Producers will reduce output by 15 percent in return for a slaughter premium of 10,000 forint (\$143) per cow. The export subsidy for milk is to be raised from 30 to 35 percent, and in exchange, the domestic producer price of milk will be reduced. The government will also purchase and provide subsidized milk for disadvantaged individuals.

Hungary, Poland, and Czechoslovakia have each made extensive efforts to recapture old Soviet markets and break into new Western markets to revive agricultural trade that has stagnated. The efforts have been complicated by a shift to trade with the Soviets on a hard-currency basis in January 1991, and trade negotiations with the EC that are proceeding slowly.

Special Articles

To compensate, the countries are exploring a variety of commercial sales or barter agreements with the Soviet Union, the EC, and other traditional trading partners. Hungary is negotiating the trade of 700,000 tons of wheat with the USSR and another 260,000 tons with the EC, Romania, and other trading partners. The government has offered loan guarantees for 500,000 tons of this wheat to be sold to the USSR, financed by a bank consortium headed by the new Central European International Bank. Hungary also plans to export another 300,000 tons of grains; wine and champagne valued at \$110 million; as well as pork and beef, to the USSR.

In Czechoslovakia, negotiations are underway for the barter of 20,000 tons of meat, 10,000 tons of butter, and 4,000 tons of powdered milk, as well as wheat, to the Russian Republic in exchange for oil, chemical products, and other raw materials.

On September 21, Poland and the Soviet Union signed a new barter agreement in which Poland will trade 600,000 tons of potatoes and several thousand tons of apples and onions for 1.5 billion cubic meters of gas. Barter trade of wheat is also being negotiated. Recently, the EC and Poland signed an agreement under which the EC will provide assistance to the Soviet Union to purchase \$600 million of Polish meat.

The key question facing East European farmers in the next year is how to respond to the price reform measures implemented in the last year in their respective countries. If they respond with enough reduction of supply, prices should stabilize or increase. But if they continue to adjust slowly to the decline in demand, domestic prices will continue to fall.

CEE farmers are lobbying their governments for protection from falling prices, but the governments have limited opportunities to provide support. Falling revenues and strict fiscal policy regimes imposed by international assistance agencies mean that significant intervention by governments to provide support is unlikely. [Jason Lamb (202) 219-0620 and Mark Lundell (202) 219-0620] **AO**

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Federal Crop Insurance: Issues & Possibilities

Each year, farmers confront the threat of poor weather conditions. This year, some farmers in the Corn Belt coped with drought. In the Delta, heavy rains caused havoc in the spring and early summer. In California, many farmers still face extremely dry conditions. Parts of the east coast and other areas have also suffered serious losses from poor weather this year.

For many farmers, crop insurance is an important mechanism for dealing with yield losses that result from a wide range of causes. But other programs, such as FmHA emergency loans, the emergency feed program, and emergency haying and grazing, also provide assistance to soften the impact of natural disasters.

This year, USDA Secretary Madigan has authorized special options to help farmers whose crops are affected by adverse weather. For instance, on May 24 the Secretary announced special planting provisions for program crop farmers unable to plant because of natural disasters. And this summer and fall, Congress has been considering alternative ways to help farmers, through ad hoc assistance.

Such assistance may, however, be more difficult to accommodate under the 1990 Omnibus Budget Reconciliation Act's "Pay-As-You-Go" scoring rules. These rules could require an

offset in another Federal program, unless the President and Congress agree that ad hoc assistance constitutes an emergency.

Overall, the 1980's saw a dual approach to dealing with yield losses. One mechanism is multi-peril crop insurance, which has been plagued by high government costs and what many perceive as low participation rates. The other approach is costly and unpredictable ad hoc disaster assistance.

This article examines some of the reasons crop insurance alone is considered by some as inadequate disaster protection. Why do some farmers choose not to participate in the crop insurance program? Why are the costs to the government so high? What types of alternative programs have been suggested?

A Short History

The crop insurance program has been continually modified since its inception in 1938 and was even canceled for 1944 crops. Two problems have persisted throughout the program's 53-year history: high costs and low participation. Because of its problems, an ongoing debate has weighed the advantages of crop insurance versus other forms of disaster protection.

During the 1970's, a statutory disaster assistance program overshadowed crop insurance. This program was popular with farmers because they paid no premiums and because the program was offered in high-risk areas where crop insurance was not available. However, critics charged that the program was expensive, that it encouraged production of crops in areas where those crops were poorly suited, and that it was inequitable because it was limited to program crops. In addition, it was believed to discourage participation in the crop insurance program.

To offset these criticisms, the Federal Crop Insurance Act of 1980 made crop insurance the primary form of disaster protection. The act authorized expansion of insurance to all counties with significant amounts of agriculture, permitting the Federal Crop Insurance Corporation (FCIC) to insure any crop given sufficient actuarial data. Premium subsidies were provided to encourage producer participation.

How the Program Works

Crop insurance is offered and administered by USDA through FCIC, and provides yield protection for a wide variety of occurrences. Since the beginning of the program in 1938, drought has been by far the major cause of loss.

Crop insurance is voluntary, and farmers who sign up for the program pay a premium. Farmers can buy crop insurance regardless of whether they enroll in the commodity programs. A farmer may choose coverage at 50, 65, or 75 percent of the farm's actual average yield over the past 10 years. (If 10 years of data are not available, adjusted ASCS program yields are sub-

stituted, if available.) A farmer receives payments based on individual yield shortfall, regardless of whether the county has been declared a disaster area.

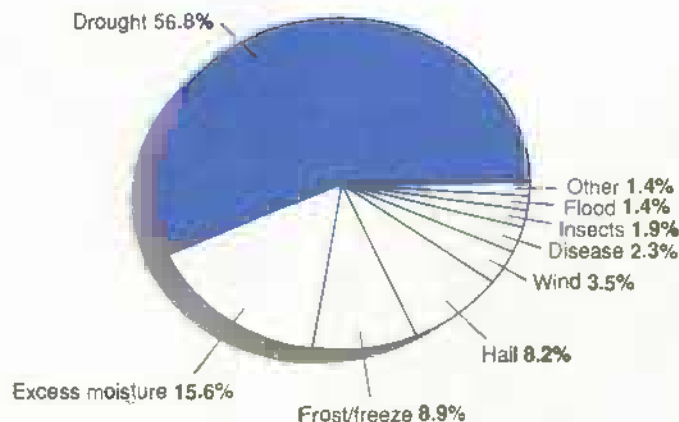
As an example, suppose a farmer chooses the 75-percent coverage option, and has a 10-year average yield of 100 bushels per acre of the insured crop. The farmer's yield must fall below 75 bushels per acre before an indemnity payment is received. This indemnity is then calculated by multiplying the amount of the yield loss (in this case, the difference between 75 bushels and the lower yield experienced by the farmer) by a predetermined price per bushel.

This predetermined price is known as a "price election," and is chosen by the farmer at crop insurance signup. The farmer has the option to choose any price at or below the price election announced by FCIC. Price elections set by FCIC are based on futures prices, supply and demand variables, and other factors.

The program is delivered primarily through private insurance companies, which typically provide insurance for farmers' property and other needs as well. Most of the risk is borne by FCIC, which provides reinsurance to the private companies. For crop insurance purposes, these companies are divided into two categories, reinsured companies and master marketers. Reinsured companies account for about 90 percent of all crop insurance business, and share the risk of potential loss with FCIC. The remaining 10 percent are master marketers, who do not share the risk of potential loss.

On average, the government pays over half the total cost of the program. The government subsidizes up to 30 percent of the premium cost, pays delivery and servicing expenses of private companies, and covers the cost of indemnities in excess of premiums.

Drought Is the Major Cause of Crop Loss



Special Articles

When Disaster Strikes...

USDA has authority to implement a variety of emergency assistance actions in response to adverse weather. In addition to providing crop insurance, USDA can provide assistance through the following:

Emergency Loans—Once a county is declared a disaster county, eligible farmers in the county may receive low-interest emergency loans from USDA's Farmers Home Administration (FmHA). A qualifying producer must experience a production loss of 30 percent or greater, be unable to obtain credit from a commercial lender, and meet other criteria.

Haying and Grazing—Farmers are normally restricted from grazing land idled under USDA commodity programs for 5 consecutive months, between April 1 and October 31. In counties designated as experiencing a natural disaster, the Secretary of Agriculture has authority to permit farmers to use the idled land for grazing or to make hay, or use the forage cover on the land during the restricted months.

Emergency Feed—Two types of emergency feed programs may be available to producers in disaster-declared counties. The Emergency Feed Assistance Program provides for the sale of CCC-owned grain, at 50 percent of the posted county price, to livestock producers in designated counties whose feed production has suffered a loss of 40 percent or more. The Emergency Feed Program has the same 40-percent loss qualification, but CCC pays up to half the cost of the feed for eligible livestock producers.

0/92 Provisions—USDA has authority to allow farmers in designated disaster areas to enroll after the signup deadline for the 0/92 portion of the wheat and feed grain programs. Eligible farmers must have been prevented from planting because of a natural disaster, and have signed up on time for the regular program. Under 0/92, farmers may place all of their permitted acreage in conserving use and still receive 92 percent of the deficiency payments they would have received if they had planted their permitted acres.

Emergency Conservation Program—This program provided emergency funds for sharing with farmers the cost of restoring farmland seriously damaged by natural disasters. Assistance is available only to help solve new conservation problems, caused by a natural disaster, that impair and endanger the land.

Low Participation Plagues Program

Despite the program's increased availability and a premium subsidy, some observers regarded the overall participation rate as disappointingly low during much of the 1980's. To provide assistance to farmers affected by natural disaster, who did not choose or were unable to purchase crop insurance, Congress passed ad hoc disaster assistance legislation in 1983, 1986, 1988, and 1989.

After the 1988 and 1989 disaster assistance acts, which mandated purchase of crop insurance by producers receiving disaster payments, participation in 1989 and 1990 exceeded 100 million acres, up substantially from 1988's 55 million. Low soil moisture in many areas also boosted participation in those years. In 1991, signups are estimated down about 16 percent from 1990.

However, participation varies widely among crops. Participation tends to be high for crops where yields are quite variable from year to year, and where the crop is the primary commodity in the area. Barley and wheat, for example, which are widely grown in semi-arid areas of the Plains, typically have high participation rates. Participation is also relatively high for certain specialty crops, such as raisins, which often require favorable weather at crucial points in the growing season.

Coverage Too Low, Premiums Too High?

The demand for crop insurance depends on an individual farmer's evaluation of the costs and benefits of insurance. If a farmer determines that the benefits of insurance do not outweigh the costs, that farmer will not buy insurance. Research shows that participation in insurance programs is positively related to expected returns of the policy. In a joint survey by ERS and the University of Maryland, 24.1 percent of the respondents said their most important reason for not purchasing crop insurance was that the premiums are too high.

The benefit of insurance depends on many factors, including a farmer's yield risk. Yield risk varies greatly among farmers, and farmers with higher yield variability are more likely to buy crop insurance. Many farmers consider insurance that pays off only when yields fall below 75 percent of normal as inadequate; they prefer coverage for less extreme losses. Almost 20 percent of respondents cited too-low coverage as their reason for not buying insurance.

Crop insurance is just one of many strategies available for dealing with risk. If a farmer is using other risk management strategies, the value of added protection from crop insurance might be small, and the farmer might prefer the risk of crop loss to the cost of purchasing crop insurance. The most important reason for not purchasing crop insurance—cited by 26 percent

of farmers surveyed—was that they preferred to absorb the risk themselves.

On the other hand, farmers with high debt/asset ratios are more likely than others to buy crop insurance. This may reflect a realization that they are less able to absorb risk themselves, or bankers' concerns about risk in loan repayment.

Common risk management strategies available to farmers are crop diversification, diversification into livestock, and off-farm employment, which diversifies total household income. Research shows that each of these three risk management strategies reduces the probability that a farmer will buy crop insurance. Nearly 11 percent of respondents said the most important reason for not buying crop insurance was diversification of their farms.

Other risk management strategies include purchase of commercial insurance against hail and fire (4.6 percent of farmers cited this as their principal reason for not buying Federal multi-peril crop insurance), participation in commodity programs, and use of futures markets.

The existence of other forms of disaster assistance is commonly believed to have a negative effect on the demand for crop insurance. However, only 3.5 percent of surveyed farmers cited this as the main reason for not purchasing crop insurance.

Another factor affecting demand for crop insurance is whether the policy offered to the farmer reflects the true risk situation on the individual's farm. Because it is difficult for FCIC to determine each farmer's risk situation, not all policies correctly reflect the actual risk. If a particular policy is based on greater risk than actually exists, the farmer is not as likely to buy the insurance since the premium cost would be high for the protection offered.

The Cost Of Protection

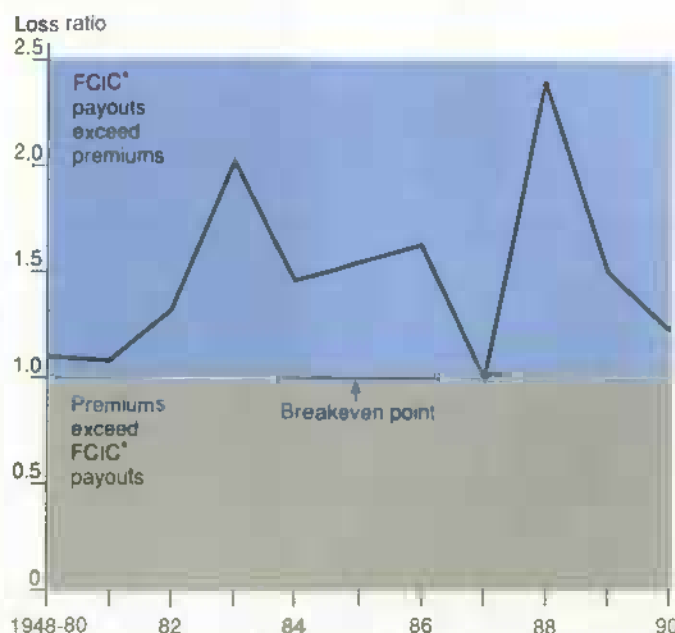
Crop insurance participation during the 1980's has been accompanied by large losses. Over the period 1981-90, total indemnities paid out exceeded total premiums (including the government-paid subsidy) by \$2.5 billion. The aggregate loss ratio for the period, expressed as total indemnities divided by total premiums, was 1.5, compared with 1.1 for the period prior to 1980.

Because of weather variations over time, the loss ratio for a given crop is unlikely to equal exactly 1.0 in any given year. For 1988—one of the driest years on record—the loss ratio for all crops was 2.4, the largest loss ratio since passage of the 1980 crop insurance act. FCIC came close to breakeven in 1987—the only year of the decade when the loss ratio was near 1.0.

Loss ratios vary widely among crops and regions, and among major field crops tend to be highest for wheat and soybeans. Consistently high loss ratios suggest that FCIC may have difficulty developing premium rates that reflect production risks. Problems that have contributed to large losses and the lack of actuarial soundness include:

- **Adverse selection.** This problem occurs when farmers know more about their own yield potential than does FCIC. For instance, a farmer might choose to sign up for crop insurance in years when his soil moisture is low at the time of signup. As a result, the farmer correctly perceives his risk as larger than implied by the premium assessed, and buys insurance based on that knowledge. In this situation, FCIC holds a disproportionate share of high-risk policies.
- **Moral hazard.** Moral hazard occurs when a farmer alters his management practices, increasing the chance of collecting an indemnity payment. For instance, a farmer might buy insurance and then not farm as well as he would otherwise, increasing the chance of collecting a payment.
- **Rapid expansion.** The rapid expansion of crop insurance coverage under the 1980 act very likely exacerbated actuarial problems. A lack of adequate yield data at times led to underwriting errors. FCIC has had particular problems assessing actuarial data for soybeans in the South. Other areas of problems included safflower acreage in California and cranberry farms in the Northern Plains.

Federal Crop Insurance Payments Continue To Exceed Premiums



Loss ratio equals payouts divided by premiums.

*Federal Crop Insurance Corporation.

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Crop Insurance for Over 50 Crops

Although not all crops are insurable in every county, over 50 different crops are currently covered by FCIC policies:

Almonds	Figs	Onions	Rice
Apples	Flax	Peaches	Rye
Apricots	Forage	Peanuts	Safflower
Barley	Forage seeding	Pears	Soybeans
Beans, dry	Grain sorghum	Peas, dry	Sugarbeets
Beans, green	Grapes	Peas, green	Sugarcane
Canning tomatoes	Hybrid corn	Pecans	Sunflower
Citrus	Hybrid grain sorghum	Peppers	Sweetcorn
Citrus trees	Macadamia nuts	Plums	Table grapes
Cling peaches	Macadamia trees	Popcorn	Tobacco
Corn	Nectarines	Potatoes	Tomatoes, fresh
Cotton	Nursery stock	Prunes	Walnuts
Cranberries	Oats	Raisins	Wheat

FCIC has taken several steps to help avert the large losses experienced over the past decade. In response to audits by USDA and the General Accounting Office, FCIC created a compliance office in 1986 to monitor agreements with reinsured companies that deliver crop insurance to producers. Later audits have shown a decline in overpayments.

FCIC has recently undertaken comprehensive rate reviews. As a result, FCIC has altered the premium rates charged to farmers so that the risk of loss is better reflected. For 1991 crops, rates increased by up to 15 percent in some areas, and declined as much as 5 percent in others.

Together with ad hoc disaster assistance, delivered through ASCS, and low-interest loans from the Farmers Home Administration, the total taxpayer cost of disaster assistance has been over \$20 billion dollars between 1983 and 1989.

Government outlays escalated because of widespread drought in 1988 and 1989. These large expenditures—over \$13 billion for the 2 years—intensified the need to reduce government costs and increase the attractiveness of the crop insurance program to farmers.

It is important to remember that subsidized crop insurance is only a portion of total Federal outlays for disaster protection to farmers. Ad hoc disaster assistance is free to farmers, while at least a portion of Federal crop insurance is paid by farmers.

It is important as well to remember that ad hoc disaster assistance also shares many of the same problems of crop insurance, such as the determination of equitable yields. In addition, ASCS—the agency that delivers ad hoc assistance—has limited data on nonprogram crops on which to base disaster payments. FCIC uses its extensive crop data to help match crops that have more variable yields with higher premiums.

1990 Farm Act Addressed Program Soundness

The 1990 farm act directed the FCIC to improve the actuarial soundness of the crop insurance program and encourage private companies to develop new, innovative policies. Specifically, the act:

- directs FCIC to adopt rates and coverage that improve actuarial soundness, with rate increases limited to 20 percent in any given year;
- directs reinsured companies to bear a larger share of the risk of loss;
- requires policyholders to provide Social Security numbers, in order to combat fraud;
- authorizes fines up to \$10,000 and disqualification from the program for 10 years, for providing false or inaccurate information.

For More on Crop Insurance . . .

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Reforming Federal Crop Insurance
by Joe Glauber, Jerry Skees, and
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Topics include:

- FCIC performance
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In addition to the provisions authorized in the 1990 act, FCIC implemented a program called "nonstandard classification" in 1991, to identify high-risk individuals who have repeated severe losses and high indemnity payments. Policies meeting the selection criteria will be identified and subjected to review and rate changes.

FCIC initiated this program to address concerns that a disproportionate share of losses during the 1980's was paid on a small percentage of policies. For instance, 40 percent of losses (indemnities in excess of premiums) for soybeans over the 1983-89 period was concentrated in 1.4 percent of the soybean policies.

Based on review findings, the insured's contract will undergo coverage or rate adjustments to improve the program's actuarial soundness. This system was implemented for 1991 soybeans, and will be in effect for wheat, corn, cotton, grain sorghum, and peanuts for the 1992 crop year.

However, two of the major changes made recently—increasing rates by up to 20 percent annually, and tightening policy terms through nonstandard classification—will likely reduce program participation.

Innovation May Improve Long-Run Participation

Despite rate reforms, innovative policy development may attract some new farmers into the program. Some insurance companies have explored the idea of offering coverage above the 75-percent maximum offered by FCIC so that less severe losses can be covered.

In addition, there has been some interest in an area-loss type of program. Under such a program, both the premiums and indemnities would be based on the yield of an area—say a county—and not the farmer's individual yield. Participating farmers would receive a payment when the area yield fell below a predetermined yield guarantee.

With this type of program, it would be easier to achieve actuarial soundness and reduce administrative costs. Because individual and county yield losses often move together, and in the same direction, producers would have coverage against widespread yield loss. In addition, the government could realize savings because adverse selection and moral hazard problems would be reduced. Administrative costs would be low because claims would be adjusted at the area level, not individually.

However, an area-loss program has drawbacks. In particular, a producer might experience a large loss, through no fault of his own, and be ineligible for an indemnity payment because the area trigger was not met. Similarly, farmers with normal yields in an area with qualifying losses may collect indemnities. Given such potential inequities, lenders may be more hesitant to make loans under such a program.

And, because the concept of an area-loss program is untested, there is no basis for determining whether producers would participate in such a program. In the meantime, crop insurance continues as the main form of permanent disaster protection for farmers. The longer term effects of the 1990 farm act on government losses and participation levels, and of additional innovative policies, remain to be seen. [Joy Harwood (202) 219-0840, Linda Calvin (202) 219-0689, and Joe Glauber (202) 395-5040]. **AO**

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Statistical Indicators

Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1989	1990	1991					1992	
	Annual	Annual	I	II	III	IV F	Annual F	I F	Annual F
Prices received by farmers (1977=100)	147	150	146	152	148	142	146	142	—
Livestock & products	160	170	167	165	158	161	164	158	—
Crops	134	128	124	138	137	123	127	126	—
Prices paid by farmers. (1977=100)									
Production items	165	171	173	175	173	163	171	—	—
Commodities & services, interest, taxes, & wages	178	184	188	190	189	181	187	—	—
Cash receipts (\$ bil.) 1/	160	169	162	171	174	167	166-171	—	—
Livestock (\$ bil.)	84	90	87	84	87	90	85-89	—	—
Crops (\$ bil.)	76	79	75	87	87	77	79-83	—	—
Market basket (1982-84=100)									
Retail cost	125	134	137	139	—	—	—	—	—
Farm value	107	114	109	109	—	—	—	—	—
Spread	134	144	153	154	—	—	—	—	—
Farm value/retail cost (%)	30	30	29	28	—	—	—	—	—
Retail prices (1982-84=100)									
Food	125	132	136	137	136	137	137	—	—
At home	124	132	136	137	135	136	136	—	—
Away from home	127	133	136	137	139	141	138	—	—
Agricultural exports (\$ bil.) 2/	39.7	40.1	11.3	8.8	8.4	—	37.5	—	—
Agricultural imports (\$ bil.) 2/	21.5	22.5	5.8	5.5	5.3	—	22.5	—	—
Commercial production									
Red meat (mil. lb.)	39,418	38,608	9,465	9,635	9,963	10,364	39,427	9,792	40,957
Poultry (mil. lb.)	22,039	23,835	5,837	6,296	6,405	6,330	24,868	6,100	25,825
Eggs (mil. doz.)	5,598	5,660	1,418	1,416	1,440	1,455	5,729	1,430	5,745
Milk (bil. lb.)	144.3	148.3	37.5	38.6	36.1	35.8	148.0	37.4	148.6
Consumption, per capita *									
Red meat and poultry (lb.)	210.4	210.8	50.9	53.3	54.7	57.0	216.0	52.7	222.4
Corn beginning stocks (mil. bu.) 3/	4,259.1	1,930.4	1,344.5	6,940.3	4,789.0	2,992.0	1,344.5	1,520.9	—
Corn use (mil. bu.) 3/	7,260.1	8,113.4	2,338.1	2,151.6	1,798.3	1,471.8	7,759.8	—	7,800.0
Prices 4/									
Choice steers—Neb. Direct (\$/cwt)**	73.86	78.56	80.09	77.92	69.37	72-76	74-76	73-79	73-79
Barrows & gilts—7 mths. (\$/cwt)	44.03	54.45	51.50	53.34	50.85	42-46	49-51	41-47	40-46
Broilers—12-city (cts./lb.)	59.0	54.8	51.2	52.2	54.2	46-50	50-52	46-52	47-53
Eggs—NY gr. A large (cts./doz.)	81.9	82.2	85.9	70.2	77.1	80-84	78-80	75-81	73-79
Milk—all at plant (\$/cwt)	13.57	13.88	11.80	11.37	12.23	12.90-13.90	12.00-12.30	11.50-12.50	11.60-12.60
Wheat—KC HRW ordinary (\$/bu.)	4.36	3.44	2.81	3.00	—	—	—	—	—
Corn—Chicago (\$/bu.)	2.55	2.51	2.45	2.51	—	—	—	—	—
Soybeans—Chicago (\$/bu.)	6.70	5.93	5.70	5.73	—	—	—	—	—
Cotton—Avg. spot 41-34 (cts./lb.)	63.7	71.3	75.4	81.0	—	—	—	—	—
	1983	1984	1985	1986	1987	1988	1989	1990	1991 F
Gross cash income (\$ bil.)	150.6	155.5	157.2	152.0	164.9	171.8	179.5	185.1	181-186
Gross cash expenses (\$ bil.)	111.0	119.0	109.3	105.2	109.6	114.4	121.2	125.4	124-129
Net cash income (\$ bil.)	39.5	36.6	47.9	46.7	55.3	57.4	58.3	59.7	54-59
Net farm income (\$ bil.)	15.3	26.3	31.0	31.0	39.7	41.0	49.2	49.6	41-46
Farm real estate values 5/									
Nominal (\$ per acre)	788	801	713	640	599	632	661	668	682
Real (1982 \$)	788	771	662	577	526	538	545	529	519

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Sept.-Nov. first quarter, Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages, Jan.-Dec. 5/ 1990-91 values as of January 1, 1986-89 values as of February 1, 1983-85 values as of April 1. F = forecast, — = not available.

* The pork carcass to retail conversion factor has been revised. ** Omaha Choice steer price has been replaced by the Nebraska Direct, 1,100-1,300 lb. Choice steer price.

U.S. & Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual			1990			1991	
	1988	1989	1990	II	III	IV	I	II R
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,873.7	5,200.8	5,465.1	5,443.3	5,514.8	5,527.3	5,557.7	5,812.4
Personal consumption expenditures	3,238.2	3,450.1	3,657.3	3,622.7	3,693.4	3,724.9	3,742.8	3,789.0
Durable goods	457.5	474.6	480.3	478.4	482.3	488.6	455.3	453.7
Nondurable goods	1,000.0	1,130.0	1,193.7	1,179.0	1,205.0	1,218.0	1,212.7	1,221.7
Clothing & shoes	191.1	204.6	213.2	212.6	216.8	211.6	213.3	218.4
Food & beverages	562.8	595.3	624.7	623.3	629.8	629.4	636.7	642.8
Services	1,720.7	1,845.5	1,983.3	1,965.3	2,006.2	2,040.4	2,074.8	2,113.6
Gross private domestic investment	747.1	771.2	741.0	759.0	759.7	698.3	680.0	654.0
Fixed investment	720.8	742.9	748.1	745.6	750.7	729.2	694.1	694.0
Change in business inventories	26.2	28.3	-5.0	13.4	9.0	-30.8	-34.2	-40.0
Net exports of goods & services	-74.1	-48.1	-31.2	-24.9	-41.3	-28.8	13.5	18.1
Government purchases of goods & services	982.5	1,025.8	1,098.1	1,086.4	1,102.8	1,132.9	1,141.5	1,151.3
1982 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,018.9	4,117.7	4,157.3	4,155.1	4,170.0	4,153.4	4,124.1	4,118.9
Personal consumption expenditures	2,606.5	2,658.8	2,681.6	2,678.8	2,696.8	2,673.8	2,663.7	2,680.5
Durable goods	418.2	428.0	427.4	426.8	429.5	415.6	402.9	401.4
Nondurable goods	909.4	919.9	911.1	911.2	916.4	901.2	897.1	902.2
Clothing & shoes	165.0	172.7	172.6	171.3	174.4	170.6	167.0	171.1
Food & beverages	482.2	482.9	457.4	459.3	459.4	453.6	453.5	453.3
Services	1,278.9	1,309.0	1,343.1	1,340.8	1,350.8	1,356.7	1,363.7	1,376.9
Gross private domestic investment	705.7	716.9	688.7	700.7	697.0	656.3	623.7	617.6
Fixed investment	682.1	693.1	692.3	691.2	692.3	682.7	648.6	650.9
Change in business inventories	23.6	23.8	-3.6	9.5	4.7	-26.4	-25.0	-33.3
Net exports of goods & services	-75.9	-54.1	-33.8	-44.6	-46.5	-8.8	7.1	-12.6
Government purchases of goods & services	780.5	798.1	820.8	820.2	822.7	832.3	829.6	833.4
GNP implicit price deflator (% change)	3.3	4.1	4.1	4.7	3.7	2.8	5.2	4.5
Disposable personal income (\$ bil.)	3,479.2	3,725.5	3,946.1	3,925.7	3,969.1	4,001.9	4,021.3	4,088.1
Disposable per. income (1982 \$ bil.)	2,800.5	2,869.0	2,893.6	2,902.8	2,898.0	2,872.4	2,861.9	2,877.9
Per capita disposable per. income (\$)	14,123	14,973	15,695	15,639	15,765	15,849	15,887	16,035
Per capita dis. per. income (1982 \$)	11,368	11,531	11,509	11,564	11,511	11,376	11,307	11,343
U.S. population, total, incl. military abroad (mil.)	248.4	248.8	251.4	251.0	251.8	252.6	252.9	253.3
Civilian population (mil.)	244.1	246.6	249.2	248.9	249.6	250.4	250.8	251.1
	Annual			1990			1991	
	1988	1989	1990	Aug	May	June	July	Aug
Monthly data seasonally adjusted								
Industrial production (1987=100)	105.4	108.1	109.2	110.5	108.4	107.3	108.0	108.2
Leading economic indicators (1982=100)	142.7	144.9	144.0	144.4	142.9	143.7	145.4	145.4
Civilian employment (mil. persons)	115.0	117.3	117.9	117.7	116.6	116.9	116.7	116.4
Civilian unemployment rate (%)	5.4	5.2	5.4	5.6	6.9	7.0	6.8	6.8
Personal income (\$ bil. annual rate)	4,070.8	4,384.3	4,645.5	4,675.0	4,787.3	4,811.0	4,803.5	4,823.8
Money stock—M2 (daily avg.) (\$ bil.) 1/	3,089.9	3,223.1	3,328.2	3,309.7	3,397.2	3,402.1	3,391.9	3,391.9
Three-month Treasury bill rate (%)	6.69	8.12	7.51	7.44	5.51	5.60	5.58	5.39
AAA corporate bond yield (Moody's) (%)	9.71	9.26	9.32	9.41	8.86	9.01	9.00	8.75
Housing starts (1,000) 2/	1,488	1,376	1,193	1,131	983	1,034	1,059	1,065
Auto sales at retail, total (mil.)	10.6	9.9	9.5	9.4	8.4	9.0	9.1	8.3
Business inventory/sales ratio	1.49	1.51	1.51	1.48	1.51	1.50	1.49	—
Sales of all retail stores (\$ bil.)	137.6	145.1	150.6	151.0	152.7	152.6	153.4 P	152.3
Nondurable goods stores (\$ bil.)	85.3	90.8	96.0	97.2	98.6	98.4	99.2 P	99.2
Food stores (\$ bil.)	27.2	28.8	30.2	30.3	31.1	31.3	31.1 P	31.0
Eating & drinking places (\$ bil.)	13.9	14.5	15.2	15.2	15.8	16.0	15.9 P	16.0
Apparel & accessory stores (\$ bil.)	7.1	7.6	7.9	8.1	8.1	8.1	8.2 P	8.2
	Annual			1990			1991	
	1988	1989	1990	Sept	June	July	Aug	Sept
Foreign exchange value of the dollar								
Japanese yen per U.S. dollar	128.2	138.1	145.0	138.4	139.6	137.8	136.8	134.3
German marks per U.S. dollar	1.757	1.881	1.617	1.570	1.780	1.785	1.744	1.693

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

Table 3.—Foreign Economic Growth, Inflation, & Export Earnings

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F	1992 F	Average 1981-90
	Annual percent change											
World, less U.S.												
Real GDP	0.7	2.1	4.1	3.8	2.9	3.5	4.3	3.4	2.4	1.6	2.6	2.9
Consumer prices	14.7	14.1	12.2	12.3	9.6	11.9	18.5	35.7	39.5	44.5	30.1	18.2
Merch. exports	-7.7	-1.5	6.4	1.0	10.9	18.3	12.8	7.2	14.7	8.9	8.9	6.9
Developed less U.S.												
Real GDP	1.0	2.1	3.7	3.5	2.8	3.2	4.4	3.6	3.3	2.0	3.1	2.9
Consumer prices	8.4	6.4	4.9	4.2	2.5	2.5	2.9	4.0	4.5	4.1	4.1	5.0
Merch. exports	-4.4	-0.5	6.3	4.6	19.4	17.8	12.2	6.0	17.1	9.8	7.2	8.7
Developing												
Real GDP	1.0	1.8	4.5	4.3	3.3	4.0	3.6	3.2	2.6	2.9	4.6	3.0
Consumer prices	30.1	39.7	35.8	36.0	27.5	35.3	56.4	75.9	102.6	40.9	26.4	46.8
Merch. exports	-12.9	-3.3	6.4	-5.3	-5.5	19.7	14.3	10.2	9.2	3.3	9.7	3.6
Asia												
Real GDP	5.5	7.8	7.5	6.6	6.4	7.3	6.3	6.9	5.3	5.0	5.2	6.8
Consumer prices	6.0	6.4	6.9	7.8	5.6	7.3	11.4	9.8	8.0	9.1	9.2	7.9
Merch. exports	-0.5	4.6	14.6	-0.9	8.8	30.1	23.2	11.5	11.5	7.5	9.5	11.4
Latin America												
Real GDP	-1.6	-2.7	3.4	3.3	3.6	3.7	0.7	0.2	-1.0	1.0	3.3	0.9
Consumer prices	76.3	118.9	117.4	128.2	82.6	116.6	218.6	345.8	521.0	122.9	65.5	178.3
Merch. exports	-10.5	-1.5	10.2	-7.7	-17.9	13.6	14.1	12.3	9.2	2.0	9.4	2.4
Africa												
Real GDP	0.8	-1.4	0.8	4.5	2.3	1.3	6.6	3.6	1.9	2.0	2.9	1.9
Consumer prices	14.1	19.4	19.1	12.3	12.6	13.1	16.9	22.1	13.6	21.9	14.6	16.9
Merch. exports	-32.4	26.0	13.5	-14.1	-16.1	16.6	-2.4	-0.1	18.6	-3.8	8.0	1.1
Middle East												
Real GDP	-2.5	3.7	2.4	2.7	-2.6	0.3	0.9	3.2	-1.5	-3.3	8.5	0.9
Consumer prices	13.3	13.3	19.4	13.6	14.9	19.1	19.4	14.5	9.1	13.7	13.9	15.1
Merch. exports	-20.9	-22.2	-10.0	-8.3	-20.6	12.0	1.7	19.6	14.4	-6.5	11.9	-3.8
Central Europe, & USSR												
Real GDP	2.4	2.7	1.9	0.6	3.3	1.0	1.6	1.0	-7.1	-14.8	-2.4	0.8
Consumer prices	15.4	6.4	5.8	8.3	10.1	12.4	20.6	93.8	83.1	221.2	154.9	26.3
Merch. exports	8.1	3.8	1.0	-1.9	5.7	10.1	5.2	-0.1	-5.3	-10.9	3.1	3.0

F = forecast.

Information contact: Alberto Jerardo, (202) 219-0717.

Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1990						
	1988	1989	1990	Sept	Apr	May	June	July	Aug R	Sept P
	1977 = 100									
Prices received										
All farm products	138	147	150	148	149	152	155	150	147	148
All crops	126	134	128	123	131	138	146	153	135	140
Food grains	138	156	123	103	110	112	108	106	111	120
Feed grains & hay	120	128	123	120	124	122	115	113	117	117
Feed grains	117	123	118	115	119	117	113	112	115	117
Cotton	95	98	107	108	117	114	111	109	111	110
Tobacco	132	145	149	153	153	153	153	153	148	158
Oil-bearing crops	108	102	92	95	94	93	92	89	88	89
Fruit, oil	185	192	192	198	213	235	398	364	365	388
Fresh market 1/	197	203	202	210	228	253	449	410	412	440
Commercial vegetables	140	152	154	146	169	214	172	133	121	131
Fresh market	136	144	144	139	163	224	163	120	106	118
Potatoes & dry beans	124	166	191	131	164	222	188	191	132	123
Livestock & products	150	160	170	172	166	165	163	162	158	155
Meat animals	168	174	193	195	198	198	192	168	160	174
Dairy products	126	140	141	143	116	117	117	122	127	130
Poultry & eggs	118	137	131	128	122	119	120	127	125	124
Prices paid										
Commodities & services										
Interest, taxes, & wage rates	170	178	184	—	190	—	—	189	—	—
Production items	157	165	171	—	175	—	—	173	—	—
Feed	128	136	128	—	125	—	—	119	—	—
Feeder livestock	192	194	213	—	223	—	—	214	—	—
Seed	150	165	165	—	163	—	—	163	—	—
Fertilizer	130	137	131	—	139	—	—	136	—	—
Agricultural chemicals	127	139	139	—	153	—	—	153	—	—
Fuels & energy	167	180	204	—	198	—	—	198	—	—
Farm & motor supplies	145	150	164	—	157	—	—	157	—	—
Auto & trucks	215	223	231	—	247	—	—	248	—	—
Tractors & self-propelled machinery	181	193	202	—	210	—	—	210	—	—
Other machinery	197	208	216	—	227	—	—	227	—	—
Building & fencing	138	141	144	—	144	—	—	148	—	—
Farm services & cash rent	151	161	166	—	172	—	—	172	—	—
Int. payable per acre on farm real estate debt	182	176	174	—	173	—	—	173	—	—
Taxes payable per acre on farm real estate	147	152	157	—	162	—	—	162	—	—
Wage rates (seasonally adjusted)	177	185	191	—	202	—	—	202	—	—
Production items, interest, taxes, & wage rates	160	167	172	—	176	—	—	174	—	—
Ratio, prices received to prices paid (%) 2/	81	83	82	80	78	80	82	79	78	78
Prices received (1910-14=100)	632	674	684	676	679	684	706	685	672	676
Prices paid, etc. (parity index) (1910-14=100)	1,167	1,220	1,265	—	1,305	—	—	1,299	—	—
Parity ratio (1910-14=100) (%) 2/	54	65	54	—	62	—	—	53	—	—

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly & will be published in January, April, July, & October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1990						
	1988	1989	1990	Sept	Apr	May	June	July	Aug R	Sept P
CROPS										
All wheat (\$/bu.)	3.72	3.72	2.61	2.46	2.60	2.64	2.55	2.49	2.63	2.89
Rice, rough (\$/cwt)	6.83	7.35	6.73	6.25	7.46	7.42	7.40	7.28	7.09	7.23
Corn (\$/bu.)	2.54	2.36	2.30	2.32	2.42	2.38	2.31	2.27	2.33	2.37
Sorghum (\$/cwt)	4.05	3.79	3.75	3.96	4.05	4.11	3.89	3.96	4.01	4.02
All hay, baled (\$/ton)	85.20	86.00	88.00	88.20	88.60	84.20	71.60	70.60	71.50	68.10
Soybeans (\$/bu.)	7.42	5.70	5.75	5.99	5.77	5.67	5.55	5.36	5.66	5.79
Cotton, upland (cts./lb.)	55.6	66.2	67.8	65.1	70.8	68.9	67.2	65.7	66.9	66.8
Potatoes (\$/cwt)	6.02	7.36	6.15	5.38	6.83	9.70	6.18	8.05	5.52	5.07
Lettuce (\$/cwt) 2/	14.70	12.60	11.50	16.30	8.93	23.10	9.46	6.65	7.97	10.80
Tomatoes fresh (\$/cwt) 2/	27.10	33.10	27.40	24.80	49.30	54.40	56.40	28.10	22.50	24.70
Onions (\$/cwt)	9.75	11.40	10.50	9.01	20.10	22.60	14.60	17.00	11.90	11.00
Dry edible beans (\$/cwt)	29.90	28.50	18.50	18.30	19.60	20.00	17.80	21.40	15.80	15.60
Apples for fresh use (cts./lb.)	17.4	13.9	20.9	24.5	19.9	22.5	24.2	24.8	24.6	29.2
Pears for fresh use (\$/ton)	358.00	336.00	349.00	385.00	390.00	431.00	754.00	—	399.00	477.00
Oranges, all uses (\$/box) 3/	7.18	7.08	5.99	4.71	7.37	7.95	21.35	19.48	20.81	21.97
Grapefruit, all uses (\$/box) 3/	5.43	4.45	6.21	5.73	5.10	4.91	5.44	4.82	2.86	1.38
LIVESTOCK										
Beef cattle (\$/cwt)	66.80	69.67	74.79	75.00	78.00	75.90	73.60	71.60	68.80	67.40
Calves (\$/cwt)	89.85	91.84	96.51	95.40	109.00	107.00	106.00	103.00	98.30	96.20
Hogs (\$/cwt)	42.54	43.24	53.99	54.30	50.80	54.10	54.70	54.20	51.20	46.60
Lambs (\$/cwt)	69.50	67.33	56.01	52.80	54.60	57.60	55.30	57.70	53.40	51.90
All milk, sold to plants (\$/cwt)	12.26	13.56	13.78	13.90	11.30	11.40	11.40	11.80	12.30	12.60
Milk, manuf. grade (\$/cwt)	11.15	12.38	12.33	12.40	10.10	10.20	10.40	10.80	11.40	11.80
Broilers (cts./lb.)	34.0	36.1	32.4	34.0	30.4	31.3	31.4	32.6	32.3	32.1
Eggs (cts./doz.) 4/	53.2	70.0	70.4	68.8	65.1	59.5	59.3	65.0	63.8	63.0
Turkeys (cts./lb.)	36.9	40.0	38.4	40.3	36.7	38.9	39.7	40.0	40.7	40.2
Wool (cts./lb.) 5/	138.0	124.0	76.8	53.2	58.4	67.4	71.8	56.4	53.0	53.9

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Excludes Hawaii. 3/ Equivalent on-tree returns. 4/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 5/ Average local market price, excluding incentive payments. R = revised. P = preliminary. -- not available.

Information contact: Ann Duncan (202) 219-0313.

Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1990	1991							
	1990	Aug	Jan	Feb	Mar	Apr	May	June	July	Aug
			1982-84=100							
Consumer Price Index, all items	130.7	131.6	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6
Consumer Price Index, less food	130.3	131.3	134.3	134.6	134.8	134.9	135.4	135.7	136.1	136.7
All food	132.4	132.9	135.8	135.5	135.8	136.7	136.8	137.2	136.5	136.0
Food away from home	133.4	134.3	135.8	136.2	136.5	137.1	137.5	137.9	138.4	138.7
Food at home	132.3	132.7	136.4	135.7	136.0	137.0	136.9	137.4	136.0	134.9
Meats 1/	128.5	130.5	133.5	132.8	133.1	132.7	133.4	133.5	133.1	132.9
Beef & veal	128.8	128.5	132.9	132.6	132.9	133.4	134.1	133.2	132.6	132.3
Pork	129.8	136.5	136.5	135.1	135.2	133.3	134.2	136.1	136.7	135.7
Poultry	132.5	133.6	131.3	132.7	131.9	131.1	132.7	131.5	132.5	132.4
Fish	146.7	145.2	151.1	148.7	149.6	148.2	147.0	146.7	146.1	145.2
Eggs	124.1	119.6	139.8	125.4	133.1	124.8	112.4	110.2	113.9	121.0
Dairy products 2/	126.5	127.3	125.2	125.2	124.9	124.5	124.4	123.9	124.0	124.5
Fats & oils 3/	126.3	127.4	132.4	133.1	132.5	133.0	132.6	131.6	131.6	132.1
Fresh fruit	170.9	169.5	190.2	190.6	195.9	202.3	204.8	204.4	198.8	187.4
Processed fruit	136.9	140.0	134.7	133.2	132.2	132.3	132.1	131.2	130.6	130.9
Fresh vegetables	151.1	139.8	159.9	152.5	151.1	169.2	167.3	180.5	157.7	142.2
Potatoes	162.6	169.8	139.6	140.9	139.6	144.4	149.1	165.8	164.3	156.2
Processed vegetables	127.5	128.8	127.7	128.4	128.2	128.4	128.7	130.0	129.3	128.7
Cereals & bakery products	140.0	141.4	144.3	144.3	144.3	145.2	145.3	145.7	145.8	146.5
Sugar & sweets	124.7	125.6	127.3	127.1	128.3	128.2	129.2	129.5	129.9	130.3
Beverages, nonalcoholic	113.5	114.3	115.7	116.3	114.9	115.5	114.9	113.9	113.1	112.9
Apparel										
Apparel, commodities less footwear	122.8	120.5	122.0	124.6	127.7	129.1	128.3	125.2	123.2	123.2
Footwear	117.4	116.3	117.3	118.4	120.8	121.9	121.7	120.2	119.3	120.2
Tobacco & smoking products	181.5	185.8	195.8	198.7	197.6	199.2	199.6	202.9	203.7	204.7
Beverages, alcoholic	129.3	130.2	137.3	141.6	142.2	142.6	142.7	143.0	143.4	143.8

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 219-0313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1990	1991					
	1988	1989	1990	Aug	Mar	Apr R	May	June	July	Aug
	1982 = 100									
Finished goods 1/	108.0	113.8	119.2	119.3	120.9	121.1	121.7	121.9	121.6	121.7
Consumer foods	112.8	118.7	124.4	124.9	125.2	125.3	126.2	125.4	124.6	123.4
Fresh fruit	113.5	113.2	117.3	120.7	135.1	131.9	132.4	137.9	145.0	134.2
Fresh & dried vegetables	105.5	118.7	118.1	98.0	97.2	119.7	148.7	135.7	107.4	91.4
Dried fruit	99.1	103.0	106.7	105.0	111.4	111.4	111.3	111.3	111.8	110.9
Canned fruit & juice	120.2	122.7	126.9	128.1	126.6	126.8	127.3	126.8	128.5	128.6
Frozen fruit & juice	129.8	123.9	138.9	146.4	112.9	112.8	112.8	112.7	112.7	109.5
Fresh veg. excl. potatoes	100.4	103.9	107.8	79.0	88.4	112.8	157.0	138.0	102.0	82.6
Canned veg. & juices	108.3	118.8	118.7	115.2	115.1	113.8	114.8	112.7	113.1	111.9
Frozen vegetables	108.6	115.5	118.5	118.3	118.3	117.9	118.0	117.7	117.5	117.6
Potatoes	113.9	153.6	157.3	161.9	134.8	158.4	138.1	146.7	137.6	123.7
Eggs	88.8	119.6	117.6	114.4	131.7	113.2	94.6	96.9	100.7	109.0
Bakery products	126.4	135.4	140.9	141.0	145.8	145.6	145.5	146.3	146.1	146.9
Meats	99.9	104.8	116.9	119.8	117.8	117.4	118.0	117.4	116.1	111.2
Beef & veal	101.4	108.9	118.0	116.2	118.2	118.4	117.5	114.9	111.6	104.8
Pork	95.0	97.7	119.7	126.2	117.7	115.7	118.9	120.8	121.8	117.0
Processed poultry	111.8	120.4	113.6	114.4	108.4	109.0	111.6	111.8	113.3	113.5
Fish	148.7	142.9	148.6	138.9	158.7	155.6	165.1	146.4	146.6	139.5
Dairy products	102.2	110.6	117.2	120.2	111.9	111.5	111.6	112.0	113.6	115.1
Processed fruits & vegetables	113.8	119.9	124.8	125.8	119.8	119.2	119.7	118.8	119.2	118.4
Shortening & cooking oil	118.8	116.6	123.2	129.4	122.7	120.8	117.2	115.0	111.6	117.4
Soft drinks	114.3	177.7	122.3	121.6	127.0	127.2	126.0	126.5	125.8	125.1
Consumer finished goods less foods	103.1	108.9	115.3	115.1	117.0	117.2	118.1	118.6	118.3	119.0
Beverages, alcoholic	111.8	115.2	117.2	116.8	124.0	124.3	123.2	123.3	123.9	123.4
Apparel	111.7	114.5	117.4	118.0	119.0	119.4	119.2	119.5	119.8	120.0
Footwear	115.1	120.8	125.8	129.0	128.0	128.3	128.4	128.8	128.7	129.4
Tobacco products	171.9	194.8	221.5	224.3	239.8	243.3	243.4	249.1	254.3	254.9
Intermediate materials 2/	107.1	112.0	114.5	114.4	114.2	113.9	114.1	114.3	114.0	114.3
Materials for food manufacturing	106.0	112.7	117.9	120.4	116.2	116.1	115.7	115.3	115.5	115.4
Flour	105.7	114.6	103.6	96.5	94.4	95.5	96.2	95.7	93.1	96.3
Refined sugar 3/	108.9	118.2	122.7	122.6	111.8	122.0	121.1	121.0	121.4	121.3
Crude vegetable oils	116.8	103.1	115.7	126.4	111.8	111.3	102.7	101.8	95.9	101.3
Crude materials 4/	96.0	103.1	108.9	110.2	101.2	100.8	102.2	99.5	99.4	99.2
Foodstuffs & feedstuffs	106.1	111.2	113.1	113.2	109.9	109.0	108.8	107.4	104.9	102.5
Fruits & vegetables 5/	108.5	114.6	117.2	107.4	113.3	124.4	140.8	138.0	123.4	109.7
Grains	97.9	106.4	97.5	92.1	94.0	94.1	92.7	90.2	84.3	93.2
Livestock	103.3	106.1	115.6	117.8	117.1	115.8	115.2	112.8	110.2	100.7
Poultry, live	121.5	128.8	118.8	122.1	110.2	107.3	113.9	112.7	119.2	120.4
Fibers, plant & animal	98.4	107.8	117.8	125.1	129.1	134.0	139.2	130.8	120.2	106.7
Fluid milk	89.4	98.8	101.3	105.5	83.1	82.9	82.8	84.8	86.6	90.3
Oilseeds	134.0	123.8	111.8	114.8	111.8	109.7	107.5	108.7	99.3	104.2
Tobacco, leaf	87.2	93.8	96.0	93.1	99.6	99.6	99.6	99.6	99.6	98.3
Sugar, raw cane	111.9	115.5	119.2	119.6	113.3	113.1	112.9	113.3	112.6	114.0
All commodities	106.9	112.2	116.3	116.5	116.2	116.0	116.5	116.3	116.0	116.2
Industrial commodities	106.3	111.6	115.8	115.9	115.7	115.6	116.5	116.0	116.0	116.4
All foods 6/	111.5	117.8	123.2	124.0	123.3	123.5	124.5	123.5	122.7	121.5
Farm products & processed foods & feeds	110.0	115.4	118.6	119.1	118.3	118.1	118.5	117.7	116.3	115.3
Farm products	104.9	110.9	112.2	111.4	109.7	109.6	110.2	108.9	105.2	102.6
Processed foods & feeds 6/	112.7	117.8	121.9	123.0	122.6	122.5	122.7	122.1	121.8	121.6
Cereal & bakery products	123.0	131.1	134.1	134.2	136.6	137.0	137.6	137.8	137.1	138.1
Sugar & confectionery	114.7	120.1	123.1	123.7	127.8	128.3	129.0	128.4	130.3	130.0
Beverages	114.3	118.4	120.8	120.6	125.3	125.5	124.5	124.7	123.8	123.1

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). R = revised.

Information contact: Ann Duncan (202) 219-0313.

Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1990	1991					
	1988	1989	1990	Aug	Mar	Apr	May	June	July	Aug
Market basket 1/										
Retail cost (1982-84=100)	116.5	124.6	133.5	134.0	137.2	138.5	138.4	139.2	137.7	138.8
Farm value (1982-84=100)	100.5	107.1	113.3	113.1	108.3	108.2	110.8	109.8	108.8	103.2
Farm-retail spread (1982-84=100)	125.1	134.1	144.4	145.2	152.7	154.7	153.1	155.0	154.2	154.6
Farm value-retail cost (%)	30.2	30.1	29.7	29.6	27.7	27.4	28.1	27.6	27.2	26.4
Meat products										
Retail cost (1982-84=100)	112.2	118.7	128.5	130.5	133.1	132.7	133.4	133.5	133.1	132.9
Farm value (1982-84=100)	99.5	103.3	118.6	120.3	117.0	117.2	117.0	115.3	112.3	105.4
Farm-retail spread (1982-84=100)	125.2	130.4	140.6	140.9	149.7	148.6	150.2	152.2	154.5	161.2
Farm value-retail cost (%)	44.9	44.8	46.0	46.7	44.5	44.7	44.4	43.7	42.7	40.2
Dairy products										
Retail cost (1982-84=100)	108.4	115.6	126.5	127.3	124.8	124.5	124.4	123.9	124.0	124.5
Farm value (1982-84=100)	90.6	99.1	101.9	105.0	85.6	85.0	84.9	85.9	87.8	89.1
Farm-retail spread (1982-84=100)	124.7	130.8	149.2	147.9	161.2	160.9	160.6	158.0	157.4	157.1
Farm value-retail cost (%)	40.1	41.1	38.6	39.6	32.9	32.8	32.7	33.2	34.0	34.4
Poultry										
Retail cost (1982-84=100)	120.7	132.7	132.5	133.6	131.9	131.1	132.7	131.5	132.5	132.4
Farm value (1982-84=100)	110.2	117.1	107.6	109.3	101.1	100.1	103.7	104.3	107.7	107.2
Farm-retail spread (1982-84=100)	132.8	150.6	161.1	161.6	167.3	166.7	166.1	162.8	161.0	161.4
Farm value-retail cost (%)	48.9	47.2	43.5	43.8	41.0	40.9	41.8	42.5	43.5	43.3
Eggs										
Retail cost (1982-84=100)	93.6	118.5	124.1	119.6	133.1	124.6	112.4	110.2	113.9	121.0
Farm value (1982-84=100)	78.7	107.5	108.0	100.0	128.7	98.6	85.4	85.2	96.6	95.4
Farm-retail spread (1982-84=100)	123.9	138.1	153.2	154.7	141.0	175.5	160.9	155.0	145.0	167.0
Farm value-retail cost (%)	52.7	58.3	55.9	53.7	62.1	49.7	48.6	48.7	54.5	50.6
Cereal & bakery products										
Retail cost (1982-84=100)	122.1	132.4	140.0	141.4	144.3	145.2	145.3	145.7	145.6	148.5
Farm value (1982-84=100)	92.7	101.7	90.5	85.7	83.5	84.9	85.4	82.9	81.0	83.5
Farm-retail spread (1982-84=100)	126.2	136.7	148.9	149.2	152.8	153.6	153.7	154.5	154.8	155.3
Farm value-retail cost (%)	9.3	9.4	7.9	7.4	7.1	7.2	7.2	7.0	6.8	7.0
Fresh fruits										
Retail cost (1982-84=100)	145.4	154.7	174.6	173.1	197.4	206.5	207.3	209.7	203.8	195.9
Farm value (1982-84=100)	118.5	108.5	128.0	121.2	165.3	162.3	165.4	213.5	173.8	165.9
Farm-retail spread (1982-84=100)	158.7	176.0	196.0	197.0	212.2	226.8	217.4	207.9	217.7	209.8
Farm value-retail cost (%)	25.3	22.2	23.2	22.1	28.4	24.8	28.2	32.2	26.9	26.7
Fresh vegetables										
Retail cost (1982-84=100)	129.3	143.1	151.1	139.8	151.1	166.2	167.3	180.5	157.7	142.2
Farm value (1982-84=100)	105.8	123.3	124.2	108.2	103.5	131.3	161.8	134.2	119.2	99.8
Farm-retail spread (1982-84=100)	141.3	153.2	165.0	158.0	175.6	166.7	170.1	204.3	177.5	164.0
Farm value-retail cost (%)	27.8	29.3	27.9	26.3	23.2	26.3	32.8	25.3	25.7	23.8
Processed fruits & vegetables										
Retail cost (1982-84=100)	117.6	125.0	132.7	135.0	130.3	130.5	130.5	130.5	129.9	129.8
Farm value (1982-84=100)	136.6	133.6	147.2	133.0	122.9	122.9	122.9	122.5	121.5	120.8
Farm-retail spread (1982-84=100)	111.7	122.3	128.1	135.6	132.6	132.9	132.9	133.0	132.5	132.6
Farm value-retail cost (%)	27.6	25.4	26.4	23.4	22.4	22.4	22.4	22.3	22.2	22.1
Fats & oils										
Retail cost (1982-84=100)	113.1	121.2	126.3	127.4	132.5	133.0	132.6	131.6	131.6	132.1
Farm value (1982-84=100)	103.0	95.6	107.1	115.8	105.8	105.8	100.0	96.4	93.8	96.2
Farm-retail spread (1982-84=100)	116.8	130.6	133.4	131.8	142.3	143.0	144.6	144.6	145.5	145.3
Farm value-retail cost (%)	24.5	21.2	22.8	24.4	21.5	21.4	20.3	19.7	19.2	19.6
	Annual			1990	1991					
	1988	1989	1990	Aug	Mar	Apr	May	June	July	Aug
Beef, Choice										
Retail price 2/ (cts./lb.)	250.3	265.7	281.0	280.6	295.4	297.1	296.1	292.4	288.4	285.4
Wholesale value 3/ (cts.)	169.4	176.8	189.6	187.1	193.4	194.1	190.9	188.1	178.8	172.2
Net farm value 4/ (cts.)	148.3	157.6	168.4	166.7	175.5	175.3	170.0	160.9	156.2	145.1
Farm-retail spread (cts.)	102.0	108.1	112.6	113.9	119.9	121.8	126.1	131.5	132.2	140.3
Wholesale-retail 5/ (cts.)	80.9	88.9	91.4	93.5	102.0	103.0	105.2	108.3	109.6	113.2
Farm-wholesale 6/ (cts.)	21.1	19.2	21.2	20.4	17.8	18.8	20.9	25.2	22.6	27.1
Farm value-retail price (%)	59	59	60	59	59	59	57	55	54	51
Pork										
Retail price 2/ (cts./lb.)	183.4	182.9	212.6	224.9	213.9	211.7	213.3	214.6	217.7	214.2
Wholesale value 3/ (cts.)	101.0	99.2	118.3	120.5	110.8	109.7	115.5	116.0	115.7	111.5
Net farm value 4/ (cts.)	69.4	70.4	87.2	90.4	82.7	81.4	87.4	87.7	89.0	81.2
Farm-retail spread (cts.)	114.0	112.5	125.4	134.5	131.2	130.3	125.9	126.9	128.7	133.0
Wholesale-retail 5/ (cts.)	82.4	83.7	94.3	104.4	103.1	102.0	97.8	98.8	102.0	102.7
Farm-wholesale 6/ (cts.)	31.6	28.8	31.1	30.1	28.1	26.3	28.1	28.3	26.7	30.3
Farm value-retail price (%)	38	38	41	45	39	38	41	41	41	38

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef. Prices from BLS. 3/ Value of wholesale (boxed beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts adjusted for transportation costs & byproduct values. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as wholesaling, and in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 219-0870, Larry Duewer (202) 219-0712.

Table 9.—Price Indexes of Food Marketing Costs

(See the September 1991 Issue.)

Information contact: Denis Dunham (202) 219-0870.

Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Produc- tion 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
				Million pounds 4/			Pounds		
Beef									
1988	386	23,589	2,380	26,355	681	422	25,252	72.6	71.19
1989	422	23,087	2,179	25,888	1,023	335	24,330	69.3	73.86
1990	335	22,743	2,358	25,434	1,006	397	24,031	67.8	78.56
1991 F	397	22,986	2,325	25,708	1,150	315	24,243	67.7	74-76
Pork									
1988	360	15,684	1,136	17,180	195	437	16,548	52.5	43.39
1989	437	15,813	896	17,146	262	313	16,571	52.0	44.03
1990	313	15,354	898	16,585	239	296	16,030	49.8	54.45
1991 F	296	15,981	852	17,109	257	375	16,477	50.6	49-51
Veal 5/									
1988	4	396	27	427	10	5	412	1.4	89.85
1989	6	355	0	360	0	4	356	1.2	91.84
1990	4	327	0	331	0	6	325	1.1	98.51
1991 F	6	299	0	305	0	4	301	1.0	101-103
Lamb & mutton									
1988	8	335	51	394	1	6	387	1.4	68.26
1989	6	347	63	416	2	8	406	1.5	67.32
1990	8	363	59	430	3	8	419	1.5	55.54
1991 F	8	360	60	428	3	8	417	1.5	52-54
Total red meat									
1988	758	40,004	3,594	44,356	887	870	42,599	127.9	—
1989	870	39,602	3,138	43,610	1,267	660	41,663	124.0	—
1990	660	38,787	3,313	42,760	1,248	707	40,805	120.1	—
1991 F	707	39,608	3,237	43,550	1,410	702	41,438	120.8	—
Broilers									
1988	25	16,187	0	16,212	785	36	15,410	62.9	56.3
1989	36	17,424	0	17,460	814	38	16,608	67.1	59.0
1990	38	18,660	0	18,698	1,143	26	17,529	70.1	54.8
1991 F	26	19,822	0	19,848	1,120	40	18,688	74.0	50-52
Mature chicken									
1988	188	633	0	821	26	157	639	2.6	—
1989	157	568	0	725	24	189	511	2.1	—
1990	189	588	0	777	25	224	528	2.1	—
1991 F	224	559	0	783	26	240	517	2.0	—
Turkeys									
1988	266	3,960	0	4,226	51	250	3,928	16.0	61.2
1989	250	4,285	0	4,535	41	236	4,259	17.2	68.7
1990	236	4,734	0	4,970	54	308	4,610	18.4	63.2
1991 F	308	4,842	0	5,149	73	260	4,816	19.1	60-62
Total poultry									
1988	479	20,780	0	21,259	842	442	19,975	81.5	—
1989	442	22,276	0	22,720	876	463	21,378	86.4	—
1990	463	23,982	0	24,445	1,222	557	22,666	90.7	—
1991 F	557	25,224	0	25,780	1,219	540	24,021	95.1	—
Red meat & poultry									
1988	1,237	60,784	3,594	65,615	1,729	1,312	62,573	209.4	—
1989	1,312	61,880	3,138	66,330	2,165	1,123	63,042	210.4	—
1990	1,123	62,769	3,313	67,205	2,470	1,264	63,471	210.8	—
1991 F	1,264	64,830	3,237	69,330	2,629	1,242	65,459	216.0	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was 70.5) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Medium # 1, Nebraska Direct 1,100-1,300 lb.; pork: barrows & gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Information contacts: Polly Cochran, or Maxine Davis (202) 219-0787.

Table 11.—U.S. Egg Supply & Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		Wholesale price*
								Total	Per capita	
									No.	
				Million dozen						Cts./doz.
1987	10.4	5,868.2	5.8	5,884.2	111.2	599.1	14.4	5,159.5	254.9	81.6
1988	14.4	5,784.2	5.3	5,803.9	141.8	605.9	15.2	5,041.0	246.8	82.1
1989	15.2	5,597.8	25.2	5,638.2	81.8	642.9	10.7	4,893.0	237.3	81.8
1990	10.7	5,659.8	9.1	5,679.8	100.5	675.8	11.6	4,891.7	234.8	82.2
1991 F	11.8	5,728.4	2.2	5,742.2	136.8	707.6	12.0	4,885.9	232.3	78-80
1992 F	12.0	5,745.0	3.0	5,760.0	134.0	740.0	12.0	4,874.0	229.9	73-79

* Cartoned grade A large eggs, New York. F = forecast

Information contact: Maxine Davis (202) 219-0767.

Table 12.—U.S. Milk Supply & Use

	Production	Farm use	Commercial		Total commercial supply	CCC net removals	Commercial		All milk price 1/	CCC net removals	
			Farm marketings	Beg. stock			Ending stocks	Disappearance		Skim solids basis	Total solids basis 2/
			Billion pounds (milkfat basis)							Billion pounds	
1984	135.4	2.9	132.4	5.1	2.7	140.2	8.7	4.8	126.7	12.4	10.9
1985	143.0	2.5	140.6	4.8	2.8	148.2	13.3	4.5	130.4	17.2	15.6
1986	143.1	2.4	140.7	4.5	2.7	147.9	10.8	4.1	133.0	14.3	12.9
1987	142.7	2.3	140.5	4.1	2.5	147.1	6.8	4.6	135.7	9.3	8.3
1988	145.2	2.2	142.9	4.6	2.4	149.9	9.1	4.3	136.5	5.5	6.9
1989	144.2	2.1	142.2	4.3	2.5	149.0	9.4	4.1	135.5	0.4	4.0
1990	148.3	2.0	146.3	4.1	2.7	153.1	9.0	5.1	139.0	1.6	4.6
1991 F	148.6	2.0	146.6	5.1	2.6	154.2	9.9	4.6	139.7	4.1	6.4

1/ Delivered to plants & dealers; does not reflect deductions. 2/ Arbitrarily weighted average of milkfat basis (40 percent) & skim solids basis (60 percent). F = forecast.

Information contact: Jim Miller (202) 219-0770.

Table 13.—Poultry & Eggs

	Annual			1990		1991				
	1988	1989	1990	Aug	Mar	Apr	May	June	July	Aug
Broilers										
Federally inspected slaughter, certified (mil. lb.)	18,124.4	17,334.2	18,553.9	1,688.8	1,518.4	1,692.0	1,739.9	1,572.1	1,746.3	1,747.5
Wholesale price, 12-city (cts./lb.)	56.3	59.0	54.8	54.9	51.4	52.0	52.0	52.7	54.3	54.9
Price of grower feed (\$/ton)	219	237	218.3	217	211	209	209	209	204	202
Broiler-feed price ratio 1/	3.1	3.0	3.0	3.0	2.9	2.9	3.0	3.0	3.2	3.2
Stocks beginning of period (mil. lb.)	24.8	35.9	38.3	30.3	27.3	30.5	32.8	36.3	41.9	44.4
Broiler-type chicks hatched (mil.) 2/	5,602.4	5,946.9	6,314.6	544.1	567.1	554.0	583.4	568.7	581.4	558.5
Turkeys										
Federally inspected slaughter, certified (mil. lb.)	3,923.4	4,174.8	4,560.9	444.0	330.1	377.1	398.4	385.0	412.6	424.0
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	61.2	66.7	63.2	66.6	59.1	60.3	62.3	62.7	63.4	64.7
Price of turkey grower feed (\$/ton)	243	251	238.4	236	235	237	236	234	229	228
Turkey-feed price ratio 1/	3.0	3.2	3.2	3.4	3.2	3.1	3.3	3.4	3.5	3.6
Stocks beginning of period (mil. lb.)	266.2	249.7	235.9	541.7	339.1	385.9	406.0	451.3	503.1	571.3
Poult placed in U.S. (mil.)	261.4	290.7	304.9	25.3	25.8	28.8	29.8	28.2	28.8	25.6
Eggs										
Farm production (mil.)	69,410	67,174	67,919	5,719	5,889	5,621	5,761	5,609	5,800	5,808
Average number of layers (mil.)	277	289	270	267	272	271	271	271	271	271
Rate of lay (eggs per layer on farms)	251	250	251.7	21.4	21.6	20.7	21.3	20.7	21.5	21.4
Cartoned price, New York, grade A large (cts./doz.) 3/	62.1	61.9	62.2	60.3	61.9	74.9	67.0	68.8	79.6	76.3
Price of laying feed (\$/ton)	203	209	202	207	199	195	195	194	188	188
Egg-feed price ratio 1/	5.3	6.7	6.9	6.4	8.1	6.7	6.1	6.1	6.9	6.8
Stocks, first of month										
Shell (mil. doz.)	1.29	0.27	0.36	0.67	0.27	0.42	0.36	0.45	0.39	0.39
Frozen (mil. doz.)	13.1	14.9	10.3	13.0	10.6	10.7	9.8	10.3	10.8	13.7
Replacement chicks hatched (mil.)	366	383	399.0	32.9	37.0	39.5	38.9	35.5	34.7	33.3

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 219-0767.

Table 14.—Dairy

	Annual			1990	1991					
	1988	1989	1990	Aug	Mar	Apr	May	June	July	Aug
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.03	12.37	12.21	13.09	10.02	10.04	10.23	10.58	10.99	11.50
Wholesale prices										
Butter, grade A Chi. (cts./lb.)	132.5	127.9	102.1	98.9	97.3	97.3	97.3	98.1	98.9	98.9
Am. cheese, Wisc. assembly pt. (cwt./lb.)	123.8	138.8	136.7	150.3	111.5	111.7	115.0	121.4	128.4	136.1
Nonfat dry milk (cwt./lb.) 2/	79.7	105.5	100.6	112.0	85.1	85.4	86.1	88.9	92.2	92.2
USDA net removals										
Total milk equiv. (mil. lb.) 3/	9,070.1	9,357.0	8,951.2	339.1	1,284.3	1,685.4	1,503.6	637.7	306.3	9.7
Butter (mil. lb.)	312.6	413.4	400.3	15.8	52.0	70.4	65.2	28.2	14.3	0.5
Am. cheese (mil. lb.)	238.1	37.4	21.5	0	13.0	15.1	8.2	7.1	-0.5	0
Nonfat dry milk (mil. lb.)	267.5	0	117.8	0	42.5	48.4	28.8	4.7	-0.5	-1.0
Milk										
Milk prod. 21 States (mil. lb.)	123,518	122,509	125,714	10,476	11,097	10,906	11,228	10,573	10,472	10,316
Milk per cow (lb.)	14,291	14,369	14,768	1,233	1,311	1,294	1,334	1,260	1,251	1,232
Number of milk cows (1,000)	8,643	8,526	8,513	8,499	8,464	8,426	8,418	8,389	8,368	8,372
U.S. milk production (mil. lb.)	145,152	144,239	148,284	12,324	13,113	12,881	13,261	12,488	12,374	12,189
Stock, beginning										
Total (mil. lb.)	7,473	8,379	9,036	13,921	15,730	16,765	18,402	18,055	18,519	19,414
Commercial (mil. lb.)	4,596	4,256	4,120	5,569	5,802	5,969	6,289	6,211	6,156	6,100
Government (mil. lb.)	2,877	4,122	4,916	8,352	9,928	10,798	12,113	12,844	13,363	13,225
Imports, total (mil. lb.) 3/	2,394	2,499	2,690	195	155	174	238	265	234	—
Commercial disappearance (mil. lb.)	136,574	135,439	138,947	12,081	11,663	10,882	11,899	12,002	12,094	—
Butter										
Production (mil. lb.)	1,207.5	1,295.4	1,302.2	84.2	131.6	133.7	126.0	98.3	88.9	85.0
Stocks, beginning (mil. lb.)	143.2	214.7	256.2	420.8	524.8	555.9	616.8	647.5	665.8	665.0
Commercial disappearance (mil. lb.)	909.8	876.0	915.2	67.9	85.1	56.3	65.2	78.0	69.5	—
American cheese										
Production (mil. lb.)	2,758.6	2,674.1	2,890.8	233.3	250.0	236.9	247.5	235.2	225.0	224.5
Stocks, beginning (mil. lb.)	370.4	293.0	236.2	362.3	343.5	381.4	403.6	406.9	412.4	404.0
Commercial disappearance (mil. lb.)	2,570.0	2,663.1	2,781.0	236.1	206.7	207.4	241.8	225.6	237.6	—
Other cheese										
Production (mil. lb.)	2,815.4	2,941.3	3,170.4	261.8	271.3	263.8	268.5	270.2	264.9	269.2
Stocks, beginning (mil. lb.)	89.7	104.7	93.2	124.0	107.5	108.2	106.9	103.8	107.7	108.7
Commercial disappearance (mil. lb.)	3,034.5	3,208.9	3,429.8	293.8	288.3	282.2	296.5	291.0	288.4	—
Nonfat dry milk										
Production (mil. lb.)	979.7	874.7	876.6	62.3	87.6	95.1	101.4	78.8	69.8	56.8
Stocks, beginning (mil. lb.)	177.2	53.1	49.5	108.7	207.1	255.8	287.0	328.8	342.8	349.7
Commercial disappearance (mil. lb.)	734.3	873.0	695.0	47.4	51.8	51.3	82.7	80.9	68.0	—
Frozen dessert										
Production (mil. gal.) 4/	1,248.0	1,214.0	1,182.9	114.3	99.3	103.5	114.7	124.9	126.4	118.1
	Annual			1990				1991		
	1988	1989	1990	I	II	III	IV	I	II P	III P
Milk production (mil. lb.)	145,152	144,239	148,284	38,740	38,626	38,632	38,285	37,470	39,630	36,313
Milk per cow (lb.)	14,145	14,244	14,642	3,627	3,820	3,820	3,575	3,708	3,855	3,642
No. of milk cows (1,000)	10,262	10,126	10,127	10,128	10,111	10,119	10,151	10,104	10,020	9,970
Milk-feed price ratio 5/	1.58	1.65	1.72	1.83	1.69	1.74	1.57	1.49	1.47	1.58
Returns over concentrate 5/ costs (\$/cwt milk)	8.99	10.18	10.39	11.13	10.00	10.60	9.03	8.30	8.10	9.00

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Hard ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. — = not available.

Information contact: LaVerne T. Williams (202) 219-0770.

Table 15.—Wool

	Annual			1990			1991		
	1988	1989	1990	II	III	IV	I	II	III
U.S. wool price, (cwt./lb.) 1/	438	370	256	272	238	227	197	200	217
Imported wool price, (cwt./lb.) 2/	372	354	287	312	281	270	235	199	194
U.S. mill consumption, scoured									
Apparel wool (1,000 lb.)	117,069	120,534	120,622	31,726	26,888	30,497	33,320	38,672	—
Carpet wool (1,000 lb.)	15,633	14,122	12,124	2,950	3,125	2,138	3,088	3,136	—

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. — = not available.

Information contact: John Lawler (202) 219-0840.

Table 16.—Meat Animals

	Annual			1990	1991					
	1988	1989	1990	Sept	Apr	May	June	July	Aug	Sept
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	8,411	8,045	8,378	8,990	9,058	8,875	8,585	7,847	7,348	7,009
Placed on feed (1,000 head)	20,854	20,834	21,215	1,735	1,402	1,717	1,077	1,317	1,439	1,821
Marketings (1,000 head)	19,918	19,422	19,238	1,445	1,655	1,668	1,701	1,724	1,711	1,588
Other disappearance (1,000 head)	1,202	1,079	1,218	79	128	141	114	92	67	76
Beef steer—corn price ratio,										
Omaha 2/	31.5	30.3	32.8	34.5	32.8	32.7	32.0	31.3	28.5	28.8
Hog—corn price ratio, Omaha 2/	19.8	18.4	23.1	25.1	20.8	22.9	23.6	24.2	21.8	19.9
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha 1,000–1,100 lb.	69.54	72.52	77.40	75.75	80.77	78.28	74.63	72.08	67.25	67.20
Choice steers, Neb. Direct, 1,100–1,300 lb.	71.19	73.88	78.58	77.80	81.09	78.29	74.39	72.15	67.24	68.07
Boning utility cows, Sioux Falls	47.21	48.98	53.80	55.41	52.13	53.40	54.19	52.41	50.08	49.77
Feeder cattle										
Medium no. 1, Oklahoma City 600–700 lb.	84.72	86.66	92.15	94.41	98.52	97.06	97.30	95.81	90.06	89.74
Slaughter hogs										
Barrows & gilts, 7-markets	43.39	44.03	54.48	55.10	51.01	54.47	54.55	55.22	50.78	46.53
Feeder pigs										
S. Mo. 40–50 lb. (per head)	36.06	33.83	51.46	47.04	60.97	62.98	42.78	40.98	38.53	38.22
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	68.26	67.32	65.54	61.75	55.50	57.70	55.75	55.60	54.31	53.25
Ewes, Good, San Angelo	38.88	38.58	35.21	32.88	35.50	29.90	33.38	34.53	31.06	29.63
Feeder lambs										
Choice, San Angelo	90.89	79.85	62.95	55.75	58.63	54.98	49.09	51.81	53.38	52.63
Wholesale meat prices, Midwest										
Boxed beef cut-out value	110.50	114.78	123.21	121.18	125.98	123.78	120.61	115.82	111.54	110.61
Canner & cutter cow beef	87.77	94.43	99.99	101.93	101.93	103.31	105.15	101.89	101.23	99.69
Pork loins, 14–18 lb. 3/	97.49	101.09	117.52	121.64	104.81	120.48	123.49	121.73	117.54	105.85
Pork bellies, 12–14 lb.	41.25	34.14	59.80	51.31	57.25	57.50	58.48	50.40	42.01	38.97
Hams, skinned, 14–17 lb.	71.03	69.39	87.70	101.75	75.00	80.00	NQ	85.00	85.00	85.00
All fresh beef retail price 4/	224.81	238.97	254.99	258.39	265.15	265.87	264.50	263.39	261.58	258.20
Commercial slaughter (1,000 head)*										
Cattle										
Steers	35,079	33,917	33,242	2,816	2,741	2,851	2,709	2,844	2,906	—
Heifers	17,348	16,539	16,587	1,276	1,439	1,491	1,445	1,515	1,543	—
Cows	10,753	10,408	10,090	842	790	850	813	863	893	—
Bulls & stags	6,338	6,316	5,920	444	460	454	400	415	415	—
Calves	644	657	644	54	52	56	51	51	55	—
Sheep & lambs	2,506	2,172	1,789	138	109	105	92	111	112	—
Hogs	5,293	5,485	5,854	440	457	461	406	451	458	—
	87,795	88,691	85,135	6,889	7,485	7,130	6,296	6,733	7,279	—
Commercial production (mil. lb.)										
Beef	23,424	22,974	22,634	1,815	1,872	1,948	1,874	1,998	2,077	—
Veal	387	344	316	26	23	23	20	22	22	—
Lamb & mutton	329	341	357	27	29	30	25	28	27	—
Pork	15,623	15,759	15,299	1,228	1,381	1,291	1,140	1,207	1,299	—

	Annual			1990			1991			
	1988	1989	1990	II	III	IV	I	II	III	IV
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	10,114	9,688	9,943	10,063	8,761	9,092	10,977	10,889	9,426	8,540
Placed on feed (1,000 head)	24,423	24,469	24,948	5,088	6,333	7,486	5,692	4,890	5,364	—
Marketings (1,000 head)	23,459	22,840	22,561	5,988	5,741	6,254	5,338	5,889	5,988	6/ 5,155
Other disappearance (1,000 head)	1,390	1,274	1,393	400	261	347	462	464	282	—
Hogs & pigs (10 States) 5/										
Inventory (1,000 head) 1/	42,675	43,210	42,200	40,190	42,630	44,120	42,800	41,990	44,470	46,950
Breeding (1,000 head) 1/	5,435	5,335	5,275	5,245	5,405	5,300	5,257	5,450	5,700	5,685
Market (1,000 head) 1/	37,240	37,875	36,925	34,945	37,225	38,820	37,643	36,540	38,770	41,265
Farrowings (1,000 head)	9,370	9,203	8,955	2,458	2,236	2,238	2,129	2,577	2,441	6/ 2,433
Pig crop (1,000 head)	72,268	71,807	70,549	19,578	17,684	17,459	16,770	20,555	19,260	—

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Prior to 1984, 8–14 lb.; 1984 & 1985, 14–17 lb.; beginning 1986, 14–18 lb. 4/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 5/ Quarters are Dec. of preceding year—Feb. (I), Mar.—May (II), June–Aug. (III), & Sept.–Nov. (IV). 6/ Intentions.
 *Classes estimated. May not add to NASS totals due to rounding. — = not available. NQ = no quotation.

Information contact: Polly Cochran (202) 219-0767.

Crops & Products

Table 17.—Supply & Utilization^{1,2}

	Area			Yield	Production	Total supply ^{4/}	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ^{5/}
	Set aside ^{3/}	Planted	Harvested									
	Mil. acres ^{1/}			Bu./acre				Mil. bu.				\$/bu.
Wheat												
1986/87	21.0	72.0	60.7	34.4	2,091	4,017	401	798	999	2,196	1,821	2.42
1987/88	23.9	65.8	55.9	37.7	2,108	3,945	280	808	1,598	2,684	1,261	2.57
1988/89	22.5	65.5	53.2	34.1	1,812	3,098	146	829	1,419	2,394	702	3.72
1989/90*	9.6	78.6	62.2	32.7	2,037	2,762	139	853	1,233	2,225	538	3.72
1990/91*	7.5	77.2	69.3	39.5	2,738	3,309	489	888	1,088	2,444	868	2.61
1991/92*	15.2	69.9	57.7	34.3	1,981	2,886	350	905	1,100	2,355	531	2.70-2.90
	Mil. acres			Lb./acre				Mil. cwt (rough equiv.)				\$/cwt
Rice												
1986/87	1.48	2.38	2.38	5,851	133.4	213.3	—	8/ 77.7	84.2	161.9	61.4	3.75
1987/88	1.57	2.36	2.33	5,555	129.8	184.0	—	8/ 80.4	72.2	152.8	31.4	7.27
1988/89	1.09	2.93	2.80	5,514	159.9	195.0	—	8/ 82.3	85.9	168.2	28.7	8.83
1989/90*	1.18	2.73	2.69	5,749	154.5	185.6	—	8/ 82.1	77.2	159.3	29.3	7.35
1990/91*	1.02	2.89	2.81	5,507	154.9	186.0	—	8/ 90.5	70.9	161.5	24.8	8.80-8.80
1991/92*	0.58	2.87	2.63	6,571	157.7	187.3	—	8/ 92.8	70.0	162.8	24.5	8.75-7.75
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
Corn												
1986/87	14.3	76.0	68.9	119.4	8,228	12,267	4,701	1,192	1,492	7,385	4,882	1.50
1987/88	23.1	66.2	59.8	119.8	7,131	12,016	4,812	1,229	1,718	7,757	4,259	1.94
1988/89	20.5	67.7	58.3	84.8	4,929	9,191	3,981	1,251	2,028	7,260	1,930	2.54
1989/90*	10.8	72.2	64.7	119.3	7,525	9,458	4,455	1,290	2,389	8,113	1,344	2.38
1990/91*	10.7	74.2	67.0	118.5	7,933	9,281	4,710	1,325	1,725	7,700	1,521	2.28
1991/92*	7.3	75.9	68.7	108.8	7,479	9,002	4,800	1,350	1,650	7,800	1,202	2.25-2.65
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
Sorghum												
1986/87	2.9	15.3	13.9	67.7	939	1,490	538	12	198	746	743	1.37
1987/88	4.1	11.8	10.5	69.4	731	1,474	555	25	232	812	683	1.70
1988/89	3.9	10.3	9.0	63.8	577	1,239	468	22	310	800	440	2.27
1989/90*	3.3	12.6	11.1	55.4	615	1,055	517	15	304	835	220	2.10
1990/91*	3.3	10.5	9.1	62.9	571	791	405	14	230	648	143	2.12
1991/92*	2.3	11.0	9.7	58.2	567	710	390	15	190	595	118	2.10-2.50
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
Barley												
1986/87	2.0	13.0	12.0	50.8	609	942	298	174	134	608	336	1.81
1987/88	2.9	10.9	10.0	62.4	521	869	253	174	121	548	321	1.81
1988/89	2.8	9.6	7.6	38.0	290	622	166	180	79	425	196	2.80
1989/90*	2.3	9.1	8.3	48.6	404	814	190	179	84	453	161	2.42
1990/91*	2.9	8.2	7.5	58.1	422	598	199	184	80	462	135	2.14
1991/92*	2.1	8.9	8.4	55.2	484	620	215	175	85	475	145	1.95-2.25
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
Oats												
1986/87	0.5	14.7	6.8	58.3	385	801	385	83	1	468	133	1.21
1987/88	0.8	17.9	6.9	54.3	374	552	358	81	1	440	112	1.58
1988/89	0.3	13.9	5.5	39.3	218	393	194	100	1	294	88	2.61
1989/90*	0.4	12.1	8.9	54.3	374	538	265	115	1	381	157	1.49
1990/91*	0.2	10.4	5.9	60.1	358	585	294	120	1	414	171	1.14
1991/92*	0.5	8.0	4.8	50.6	243	489	235	125	1	361	108	1.10-1.20
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
Soybeans												
1986/87	0	60.4	58.3	33.3	1,943	2,479	7/ 108	1,179	757	2,042	438	4.78
1987/88	0	58.2	57.2	33.9	1,938	2,375	7/ 97	1,174	802	2,073	302	5.88
1988/89	0	58.8	57.4	27.0	1,549	1,855	7/ 88	1,058	527	1,673	182	7.42
1989/90*	0	60.8	59.5	32.3	1,924	2,109	7/ 101	1,146	623	1,870	239	5.69
1990/91*	0	57.8	58.6	34.0	1,926	2,167	7/ 98	1,180	580	1,838	329	5.75
1991/92*	0	59.8	58.6	33.0	1,934	2,268	7/ 98	1,225	625	1,948	320	5.00-6.00
	Mil. acres			Bu./acre				Mil. lbs.				\$/cwt./lb.
Soybean oil												
1986/87	—	—	—	—	12,793	13,745	—	10,833	1,187	12,020	1,725	15.40
1987/88	—	—	—	—	12,974	14,895	—	10,930	1,873	12,803	2,092	22.67
1988/89	—	—	—	—	11,737	13,967	—	10,591	1,661	12,252	1,715	21.10
1989/90*	—	—	—	—	13,004	14,741	—	12,083	1,353	13,438	1,305	22.30
1990/91*	—	—	—	—	13,250	14,570	—	12,000	700	12,700	1,870	21.00
1991/92*	—	—	—	—	13,720	15,600	—	12,200	1,000	13,200	2,400	18.0-19.0
	Mil. acres			Bu./acre				1,000 tons				\$/ton
Soybean meal												
1986/87	—	—	—	—	27,758	27,970	—	20,387	7,343	27,730	240	183
1987/88	—	—	—	—	28,060	28,300	—	21,293	6,854	28,147	153	222
1988/89	—	—	—	—	24,943	25,100	—	19,657	5,270	24,927	173	233
1989/90*	—	—	—	—	27,719	27,900	—	22,558	5,024	27,582	318	174
1990/91*	—	—	—	—	28,142	28,480	—	22,880	5,200	28,080	400	170
1991/92*	—	—	—	—	29,045	29,450	—	23,250	5,850	29,100	350	185-185

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

	Area		Harvested	Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending Stocks	Farm price
	Set Aside	Planted										
	3/					4/						5/
	Mill. acres		Lb./acre		Mill. bales							
Cotton 10/												
1986/87	4.2	10.0	8.5	552	9.7	10.1	—	7.5	6.7	14.1	5.0	52.40
1987/88	4.0	10.4	10.0	708	14.8	19.8	—	7.6	6.6	14.2	5.8	64.30
1988/89	2.2	12.5	11.9	619	15.4	21.2	—	7.8	6.1	13.9	7.1	69.60
1989/90*	3.5	10.6	9.5	614	12.2	19.3	—	8.8	7.7	16.5	3.0	66.20
1990/91*	2.0	12.3	11.7	634	15.5	18.5	—	8.6	7.8	16.4	2.3	67.80
1991/92*	0.9	14.1	13.4	630	17.6	20.0	—	9.0	7.2	16.2	3.9	11/

* October 10, 1991 Supply & Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats; August 1 for cotton & rice; September 1 for soybeans, corn, & sorghum; October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres; 1 metric ton = 2204.622 pounds; 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, & 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-92, & 0-92 programs. Data for 1991/92 are preliminary. 4/ Includes imports. 5/ Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Simple average of crude soybean oil, Decatur. 9/ Simple average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. 11/ USDA is prohibited from publishing cotton price projections. — = not available or not applicable.

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 18.—Cash Prices, Selected U.S. Commodities

	Marketing year 1/				1990	1991				
	1986/87	1987/88	1988/89	1989/90	Aug	Apr	May	June	July	Aug
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	2.72	2.96	4.17	4.22	2.89	2.98	3.04	2.99	2.91	3.10
Wheat, DNS, Minneapolis (\$/bu.) 3/	3.07	3.16	4.36	4.16	3.05	3.07	3.10	3.04	2.94	3.10
Rice, S.W. La. (\$/cwt) 4/	10.25	10.25	14.85	15.55	14.65	16.40	16.50	17.25	16.95	16.40
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	1.64	2.14	2.68	2.52	2.52	2.59	2.50	2.43	2.40	2.52
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	2.73	3.40	4.17	4.24	4.27	4.34	4.13	4.02	4.05	4.22
Barley, feed, Duluth (\$/bu.) 5/	1.44	1.78	2.32	2.20	1.99	2.12	2.13	2.02	1.89	1.92
Barley, malting, Minneapolis (\$/bu.)	1.89	2.04	4.11	3.20	2.35	2.48	2.41	2.26	2.14	2.14
U.S. Price, SLM, 1-1/16 in. (cts./lb.) 6/	53.2	63.1	57.7	69.8	76.3	79.9	83.9	79.1	71.3	68.4
Northern Europe prices Index (cts./lb.) 7/	62.0	72.3	66.4	82.3	81.0	83.2	84.4	83.8	80.7	72.9
U.S. M 1-3/32 in. (cts./lb.) 8/	61.8	76.3	69.2	83.8	80.5	96.8	99.3	—	—	75.5
Soybeans, no. 1 yellow, 30 day, Chicago (\$/bu.)	5.03	6.67	7.41	5.86	6.06	5.84	5.71	5.65	5.39	5.65
Soybean oil, crude, Decatur (cts./lb.)	15.40	22.70	21.10	22.30	25.00	21.50	20.20	19.70	18.10	20.20
Soybean meal, 44% protein, Decatur (\$/ton)	162.70	221.90	233.00	173.75	172.40	171.50	171.00	171.10	169.70	177.80

1/ Beginning June 1 for wheat & barley; Aug. 1 for rice & cotton; Sept. 1 for corn, sorghum & soybeans; Oct. 1 for soybean meal & oil. 2/ Ordinary protein. 3/ 14% protein. 4/ Long grain, milled basis. 5/ Beginning Mar. 1987 reporting point changed from Minneapolis to Duluth. 6/ Average spot market. 7/ Liverpool Cotton (A) Index; average of five lowest prices of 11 selected growths. 8/ Memphis territory growths. — = not available.

Information contact: Joy Harwood (202) 219-0840.

Table 19.—Farm Programs, Price Supports, Participation & Payment Rates

	Payment rates							Effective base acres 2/	Program 3/	Participation rate 4/
	Target price	Loan rate	Findley loan rate 1/	Deficiency	Paid land diversion					
					Mandatory	Optional				
				\$/bu.				Mil. acres	Percent of base	Percent of base
Wheat										
1986/87 5/	4.38	3.00	2.40	1.98	1.10	2.00	91.6	22.5/2.5/5-10		85
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.5/0/0		88
1988/89	4.23	2.78	2.21	0.69	—	—	84.8	27.5/0/0		86
1989/90	4.10	2.58	2.06	0.32	—	—	62.3	10/0/0		78
1990/91 6/	4.00	2.44	1.95	1.28	—	—	80.5	7/ 5/0/0		83
1991/92	4.00	2.52	2.04	1.47	—	—	79.3	15/0/0		85
1992/93	4.00	—	—	—	—	—	—	5/0/0		—
Rice				\$/cwt						
1985/86	11.90	8.00	8/ 3.16	3.90	3.50	—	4.2	20/15/0		90
1986/87 5/	11.90	7.20	8/ 3.94	4.70	—	—	4.2	35/0/0		94
1987/88	11.66	6.84	8/ 5.79	4.82	—	—	4.2	35/0/0		96
1988/89	11.15	6.63	8/ 6.21	4.31	—	—	4.2	25/0/0		94
1989/90	10.80	6.50	8/ 5.71	3.59	—	—	4.2	25/0/0		95
1990/91 6/	10.71	6.50	8/ 5.98	4.21	—	—	4.2	20/0/0		94
1991/92	10.71	6.50	—	3.78	—	—	4.2	5/0/0		95
Corn				\$/bu.						
1986/87 5/	3.03	2.40	1.92	1.11	—	—	81.7	17.5/2.5/0		86
1987/88	3.03	2.28	1.82	1.09	0.73	2.00	81.6	20/0/15		91
1988/89	2.93	2.21	1.77	0.36	—	1.75	82.9	20/0/10		87
1989/90	2.84	2.06	1.65	0.58	—	—	82.7	10/0/0		80
1990/91 6/	2.75	1.96	1.67	0.63	—	—	82.6	10/0/0		77
1991/92	2.75	1.89	1.62	0.58	—	—	82.9	7.5/0/0		77
1992/93	—	—	—	—	—	—	—	5/0/0		—
Sorghum				\$/bu.						
1986/87 5/	2.88	2.28	1.82	1.06	0.65	—	19.0	9/ (same)		74
1987/88	2.88	2.17	1.74	1.14	—	1.90	17.4	—		85
1988/89	2.78	2.10	1.68	0.48	—	1.65	16.8	—		82
1989/90	2.70	1.96	1.57	0.66	—	—	16.2	—		71
1990/91 6/	2.61	1.88	1.49	0.58	—	—	15.4	—		70
1991/92	2.61	1.80	1.54	0.56	—	—	13.5	—		77
1992/93	—	—	—	—	—	—	—	—		—
Barley				\$/bu.						
1986/87 5/	2.60	1.95	1.56	0.99	0.67	—	12.4	9/ (same)		72
1987/88	2.60	1.86	1.49	0.79	—	1.60	12.5	—		85
1988/89	2.51	1.80	1.44	0.00	—	1.40	12.4	—		79
1989/90	2.43	1.68	1.34	0.00	—	—	12.3	—		67
1990/91 6/	2.38	1.60	1.28	0.22	—	—	11.9	—		68
1991/92	2.38	1.54	1.32	0.47	—	—	11.5	—		78
1992/93	—	—	—	—	—	—	—	—		—
Oats				\$/bu.						
1986/87 5/	1.60	1.23	0.99	0.39	0.38	—	9.2	9/ (same)		38
1987/88	1.60	1.17	0.94	0.20	—	0.80	8.4	—		45
1988/89	1.55	1.14	0.90	0.00	—	—	7.9	5/0/0		30
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0		18
1990/91 6/	1.45	1.01	0.81	0.33	—	—	7.5	5/0/0		08
1991/92	1.45	0.97	0.83	0.15	—	—	7.3	0/0/0		38
1992/93	—	—	—	—	—	—	—	—		—
Soybeans 10/				\$/bu.						
1985/86	—	5.02	—	—	—	—	—	—		—
1986/87 5/	—	4.77	—	—	—	—	—	—		—
1987/88	—	4.77	—	—	—	—	—	—		—
1988/89	—	4.77	—	—	—	—	—	—		—
1989/90	—	4.53	—	—	—	—	—	—		—
1990/91 6/	—	4.50	—	—	—	—	—	11/ 10/25		—
1991/92	—	5.02	—	—	—	—	—	11/ 0/25		—
1992/93	—	—	—	—	—	—	—	11/ 0/25		—
Upland cotton				Cts./lb.						
1985/88	81.0	57.30	57.30	23.70	30.00	—	15.9	20/10/0		82
1986/87 5/	81.0	55.00	12/ 44.00	26.00	—	—	15.5	25/0/0		92
1987/88	79.4	52.25	13/ 60.00	17.3	—	—	14.5	25/0/0		93
1988/89	75.9	51.80	13/ 51.89	19.4	—	—	14.5	12.5/0/0		89
1989/90	73.4	50.00	13/ 65.05	13.1	—	—	14.6	25/0/0		89
1990/91 6/	72.9	50.27	13/ 63.00	7.3	—	—	14.4	12.5/0/0		86
1991/92 14/	72.9	50.77	13/ —	10.0	—	—	14.6	5/0/0		84

1/ There are no Findley loan rates for rice or cotton. See footnotes 8/, 12/, and 13/. 2/ National effective crop acreage base as determined by ASCS. Net of CRP. 3/ Program requirements for participating producers (mandatory acreage reduction program/mandatory paid land diversion/optional paid land diversion). Acres idled must be devoted to a conserving use to receive program benefits. 4/ Percentage of effective base acres enrolled in acreage reduction programs. 5/ Payments and loans received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Payments and loans were reduced by 1.4 percent in 1990/91 due to Gramm-Rudman-Hollings. Budget Reconciliation Act reductions to deficiency payments rates were also in effect in that year. Data do not include these reductions. 7/ Under 1990 modified contracts, participating producers plant up to 105 percent of their wheat base acres. For every acre planted above 95 percent of base, the acreage used to compute deficiency payments was cut by 1 acre. 8/ A marketing loan has been in effect for rice since 1985/86. Loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly). However, loans cannot be repaid at less than a specified fraction of the loan rate. Data refer to annual average adjusted world prices. 9/ The sorghum, oats, and barley programs are the same as for corn except as indicated. 10/ There are no target prices, base acres, acreage reduction programs, or deficiency payment rates for soybeans. 11/ Nominal percentage of program crop base acres permitted to shift into soybeans without loss of base. 12/ A marketing loan has been in effect for cotton since 1986/87. The loan repayment rate was fixed at 80 percent of the loan rate in 1986/87 (Plan A). 13/ In 1987/88 and after, loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly; Plan B). Starting in 1991/92, loans cannot be repaid at less than 70 percent of the loan rate. Data refer to annual average adjusted world prices. 14/ A marketing certificate program was implemented on Aug. 1, 1991. — = not available.

Table 20.—Fruit

	1982	1983	1984	1985	1986	1987	1988	1989	1990 P
Citrus 1/									
Production (1,000 ton)	12,139	13,682	10,832	10,525	11,058	11,993	12,761	13,186	11,323
Per capita consumpt. (lbs.) 2/	24.8	29.5	24.0	22.8	26.0	25.8	26.4	25.4	22.4
Noncitrus 3/									
Production (1,000 tons)	14,658	14,168	14,301	14,191	13,874	16,011	15,893	16,321	15,572
Per capita consumpt. (lbs.) 2/	62.8	63.6	67.7	66.7	69.8	75.4	72.7	74.3	69.8
	1990	1991							
	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
F.o.b. shipping point prices									
Apples (\$/carton) 4/	13.08	14.06	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Pears (\$/box) 5/	13.00	14.00	13.85	13.48	13.74	15.12	18.90	—	—
Grower Prices									
Oranges (\$/box) 6/	6.18	6.62	5.98	7.41	7.37	7.95	21.35	19.48	20.81
Grapefruit (\$/box) 6/	5.63	5.66	4.50	5.43	5.10	4.91	5.44	4.82	2.86
Stocks, ending									
Fresh apples (mil. lbs.)	3,378.3	2,694.8	2,100.7	1,569.8	1,060.9	690.7	385.8	163.0	17.9
Fresh pears (mil. lbs.)	266.2	191.1	145.4	95.0	50.8	14.7	—	12.8	137.5
Frozen fruits (mil. lbs.)	838.0	760.7	679.6	635.2	566.7	549.8	590.6	762.6	819.9
Frozen orange juice (mil. lbs.)	1,031.6	1,195.8	1,199.5	1,236.7	1,363.2	1,304.7	1,110.6	967.7	875.6

1/ 1990 indicated 1989/90 season. 2/ Fresh per capita consumption. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary. — = not available.

Information contact: Wynne Napper (202) 219-0884.

Table 21.—Vegetables

	Calendar year									
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Production										
Total vegetables (1,000 cwt)	392,343	430,795	403,509	456,334	453,030	448,629	478,381	468,779	542,437	561,768
Fresh (1,000 cwt) 1/ 3/	183,456	193,451	185,782	201,817	203,549	203,165	220,539	228,397	239,281	239,114
Processed (tons) 2/ 3/	10,444,330	11,667,170	10,886,350	12,725,880	12,474,040	12,273,200	12,892,100	12,019,110	15,167,790	16,132,660
Mushrooms (1,000 lbs.) 4/	517,146	490,826	561,531	595,681	667,958	614,393	631,819	667,759	714,992	749,488
Potatoes (1,000 cwt)	340,823	355,131	333,726	362,039	406,609	361,743	389,320	356,438	370,444	402,110
Sweetpotatoes (1,000 cwt)	12,799	14,833	12,083	12,902	14,573	12,368	11,611	10,945	11,358	12,594
Dry edible beans (1,000 cwt)	32,751	25,563	15,520	21,070	22,175	22,886	26,031	19,253	23,729	32,429
	1990	1991								
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Shipments										
Fresh (1,000 cwt) 5/	17,623	17,112	23,352	19,405	19,215	20,661	30,642	26,747	28,105	17,211
Potatoes (1,000 cwt)	11,405	10,434	14,881	11,322	12,337	14,497	15,695	10,395	10,720	8,706
Sweetpotatoes (1,000 cwt)	929	545	399	400	486	283	291	188	151	83

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeysuckle, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Fresh & processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1 - June 30. 5/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeysuckle, & watermelons.

Information contacts: Gary Lucier or Cathy Greene (202) 219-0884.

Table 22.—Other Commodities

	Annual					1990			1991	
	1986	1987	1988	1989	1990	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June
Sugar										
Production 1/	6,257	7,309	7,087	6,840	6,319	672	652	3,419	2,206	826
Deliveries 1/	7,786	8,167	8,188	8,309	8,633	2,058	2,316	2,315	2,019	2,103
Stocks, ending 1/	3,225	3,195	3,132	2,948	2,642	2,165	1,210	2,729	3,530	2,487
Coffee										
Composite green price N.Y. (cts/lb.)	185.18	109.14	115.59	95.17	76.93	78.55	79.10	76.85	74.94	72.13
Imports, green bean equiv. (mil. lbs.) 2/	2,596	2,638	2,072	2,630	2,714	702	530	616	748	563
	Annual	1990								1991
	1988	1989	1990	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Tobacco										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.61	—	—	—	1.73	1.72	1.65	—	—	—
Burley (\$/lb.)	1.61	—	1.71	167.5	—	—	1.75	1.75	1.78	177.0
Domestic consumption 4/										
Cigarettes (bil.)	562.5	540.1	523.1	41.2	43.3	44.0	45.6	34.1	34.5	39.4
Large cigars (mil.)	2,531	2,467.6	2,343.4	156.9	195.5	191.1	209.8	157.9	152.1	144.9

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct-Sept for burley. 4/ Taxable removals. — = not available.

Information contacts: sugar, Peter Buzzanell (202) 219-0886, coffee, Fred Gray (202) 219-0888, tobacco, Verner Giese (202) 219-0890.

World Agriculture

Table 23.—World Supply & Utilization of Major Crops, Livestock & Products

	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91 P	1991/92 F
	Million units						
Wheat							
Area (hectares)	230.2	228.3	219.9	217.9	228.2	231.8	222.8
Production (metric tons)	501.0	531.1	502.4	501.3	537.8	593.6	550.3
Exports (metric tons) 1/	84.8	91.3	106.1	97.2	96.1	93.4	105.0
Consumption (metric tons) 2/	496.6	523.0	531.2	531.8	534.1	572.4	557.2
Ending stocks (metric tons) 3/	169.7	177.6	148.8	118.3	121.7	142.9	135.9
Coarse grains							
Area (hectares)	342.0	336.9	324.5	326.1	323.1	318.0	320.5
Production (metric tons)	844.2	833.0	795.2	731.3	802.6	833.8	800.3
Exports (metric tons) 1/	83.2	83.7	82.9	84.2	100.0	85.3	83.1
Consumption (metric tons) 2/	779.9	807.2	815.6	795.6	828.2	823.6	810.9
Ending stocks (metric tons) 3/	208.2	234.0	213.6	149.3	123.8	134.0	123.3
Rice, milled							
Area (hectares)	145.0	145.4	141.7	145.8	146.4	147.1	145.8
Production (metric tons)	319.1	319.0	314.5	331.0	344.6	352.3	343.9
Exports (metric tons) 4/	12.6	12.9	11.9	15.1	12.0	12.5	12.9
Consumption (metric tons) 2/	319.7	323.0	320.2	328.7	337.9	348.0	346.3
Ending stocks (metric tons) 3/	55.4	51.4	45.6	47.9	54.8	58.9	56.5
Total grains							
Area (hectares)	717.2	710.8	686.1	689.6	695.7	696.9	689.1
Production (metric tons)	1,664.3	1,683.1	1,612.1	1,563.6	1,684.8	1,779.7	1,694.5
Exports (metric tons) 1/	180.6	187.8	200.9	206.5	208.1	191.2	201.0
Consumption (metric tons) 2/	1,596.2	1,653.3	1,667.0	1,656.1	1,700.2	1,744.0	1,714.4
Ending stocks (metric tons) 3/	433.3	463.0	408.0	315.5	300.1	335.8	315.7
Oilseeds							
Crush (metric tons)	155.1	161.8	168.5	166.4	173.2	178.4	179.6
Production (metric tons)	196.2	194.8	210.8	204.2	214.1	217.5	222.4
Exports (metric tons)	34.5	37.7	39.5	32.0	35.9	34.3	35.3
Ending stocks (metric tons)	26.8	23.3	24.0	22.2	23.3	21.8	23.1
Meals							
Production (metric tons)	105.0	110.7	115.4	112.2	117.8	120.5	121.2
Exports (metric tons)	34.4	36.7	35.8	37.7	38.8	39.0	39.0
Oils							
Production (metric tons)	49.4	50.4	53.3	53.9	57.6	58.7	60.1
Exports (metric tons)	18.4	16.9	17.5	18.3	20.0	20.0	19.8
Cotton							
Area (hectares)	31.7	29.5	31.0	33.7	31.6	33.1	34.2
Production (bales)	80.4	70.7	81.0	84.8	80.0	86.9	90.7
Exports (bales)	20.3	28.0	23.2	25.9	24.0	23.4	23.8
Consumption (bales)	76.9	82.8	84.1	85.2	86.7	85.5	88.2
Ending stocks (bales)	48.5	35.9	32.9	32.1	26.4	27.8	30.2
	1985	1986	1987	1988	1989	1990 P	1991 F
Red meat							
Production (metric tons)	105.5	108.6	111.5	115.2	116.8	118.3	119.8
Consumption (metric tons)	103.4	107.4	109.7	113.4	115.2	118.6	118.1
Exports (metric tons) 1/	6.3	8.7	8.7	8.9	7.4	6.9	7.2
Poultry 5/							
Production (metric tons)	26.2	29.3	31.3	32.9	34.2	35.7	37.2
Consumption (metric tons)	25.8	28.9	30.8	32.5	33.8	35.1	36.6
Exports (metric tons) 1/	1.2	1.2	1.5	1.7	1.8	2.1	2.2
Dairy							
Milk production (metric tons)	413.4	425.9	425.9	429.1	435.0	440.9	442.0

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1986 data correspond with 1985/86, etc. 5/ Poultry excludes the Peoples Republic of China before 1986. P = preliminary. F = forecast.

Information contacts: Crops, Carol Whitton (202) 219-0824; red meat & poultry, Linda Bailey (202) 219-1285; dairy, Sara Short (202) 219-0770.

U.S. Agricultural Trade

Table 24.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1990		1991					
	1988	1989	1990	Aug	Mar	Apr	May	June	July	Aug	
Export commodities											
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.97	4.65	3.72	3.21	3.28	3.31	3.35	3.29	3.22	3.44	
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.73	2.85	2.79	2.80	2.79	2.81	2.70	2.66	2.69	2.81	
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.52	2.70	2.65	2.67	2.80	2.79	2.82	2.61	2.66	2.69	
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	7.81	7.06	6.24	6.42	6.14	6.20	6.09	6.03	5.79	6.07	
Soybean oil, Decatur (\$/cwt)	23.52	20.21	22.75	24.76	22.20	21.46	20.29	19.55	18.87	20.09	
Soybean meal, Decatur (\$/ton)	234.75	216.59	169.37	171.09	165.70	171.32	171.14	171.43	169.70	181.32	
Cotton, 8—market avg. spot (cts./lb.)	57.25	63.78	71.25	76.27	77.92	79.93	83.94	79.05	71.33	66.44	
Tobacco, avg. price at auction (cts./lb.)	147.82	161.74	166.06	162.84	170.69	171.12	171.12	171.12	170.66	165.49	
Rice, f.o.b. mill, Houston (\$/cwt)	19.60	15.68	15.52	15.81	16.00	16.00	16.00	17.00	17.00	17.00	
Inedible tallow, Chicago (cts./lb.)	16.64	14.71	13.54	10.12	13.63	13.57	12.25	12.38	12.96	14.00	
Import commodities											
Coffee, N.Y. spot (\$/lb.)	1.21	1.04	0.81	0.81	0.82	0.80	0.76	0.71	0.68	0.66	
Rubber, N.Y. spot (cts./lb.)	59.20	50.65	46.28	47.46	49.09	45.92	45.16	45.26	44.59	44.45	
Cocoa beans, N.Y. (\$/lb.)	0.69	0.55	0.55	0.55	0.53	0.50	0.47	0.45	0.45	0.49	

Information contact: Mary Teymourian (202) 219-0824.

Table 25.—Indexes of Real Trade-Weighted Dollar Exchange Rates ^{1/}

	1990		1991								
	Nov	Dec	Jan	Feb	Mar	Apr P	May P	June P	July P	Aug P	Sept P
	1985 = 100										
Total U.S. trade 2/	60.1	60.8	61.0	59.8	63.5	66.3	66.7	68.9	69.7	68.2	69.7
Agricultural trade											
U.S. markets	74.7	75.3	75.5	74.6	76.5	78.0	78.2	79.4	80.6	79.8	80.6
U.S. competitors	73.3	73.5	74.9	73.9	75.2	76.3	76.6	77.3	77.6	77.2	77.8
Wheat											
U.S. markets	90.9	92.4	93.7	93.0	94.0	94.6	95.3	96.6	98.7	98.4	99.2
U.S. competitors	68.6	68.0	69.2	68.7	70.3	71.1	71.1	71.7	72.0	71.3	71.7
Soybeans											
U.S. markets	63.1	63.7	64.0	62.8	65.2	67.9	68.3	70.0	71.0	70.0	71.1
U.S. competitors	54.0	53.1	59.0	57.7	56.9	57.1	57.4	57.5	57.4	57.3	57.3
Corn											
U.S. markets	69.1	69.9	69.9	68.6	70.9	71.7	71.9	73.0	74.5	74.0	74.7
U.S. competitors	58.3	57.1	61.3	60.7	63.1	64.7	65.0	65.9	66.4	65.6	66.8
Cotton											
U.S. markets	72.1	73.0	73.0	72.0	74.1	74.6	74.8	75.8	77.2	76.8	77.4
U.S. competitors	83.5	82.8	62.8	81.6	80.7	80.6	80.2	79.8	79.5	78.7	78.2

^{1/} Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. ^{2/} Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 219-0718.

Table 26.—Trade Balance

	Fiscal year 1/								July
	1984	1985	1986	1987	1988	1989	1990	1991 F	1991
	\$ million								
Exports									
Agricultural	38,027	31,201	26,312	27,876	35,316	39,611	40,203	37,500	2,926
Nonagricultural	170,014	179,236	179,291	202,911	258,656	301,248	328,075	—	26,976
Total 2/	208,041	210,437	205,603	230,787	293,972	340,859	368,279	—	31,902
Imports									
Agricultural	16,916	19,740	20,884	20,650	21,014	21,476	22,561	22,500	1,760
Nonagricultural	297,736	313,722	342,846	367,374	409,138	441,075	458,100	—	39,163
Total 3/	314,652	333,462	363,730	388,024	430,152	462,551	480,661	—	40,923
Trade balance									
Agricultural	19,111	11,461	5,428	7,226	14,302	18,135	17,642	15,000	1,166
Nonagricultural	-127,722	-134,486	-163,555	-164,463	-150,482	-139,827	-132,024	—	-10,187
Total	-108,611	-123,025	-158,127	-157,237	-136,180	-121,692	-114,382	—	-9,021

^{1/} Fiscal years begin October 1 & end September 30. Fiscal year 1990 began Oct. 1, 1989 & ended Sept. 30, 1990. ^{2/} Domestic exports including Department of Defense shipments (F.A.S. value). ^{3/} Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 27.—U.S. Agricultural Exports & Imports

	Fiscal year*			July	Fiscal year*			July
	1989	1990	1991 F	1991	1989	1990	1991 F	1991
	1,000 units				\$ million			
EXPORTS								
Animals, live (no.) 1/	757	685	—	144	475	361	—	37
Meats & preps., excl. poultry (mt)	869	876	2/ 700	82	2,355	2,457	—	229
Dairy products (mt) 1/	192	93	—	7	475	358	400	37
Poultry meats (mt)	418	564	600	48	507	655	—	61
Fats, oils, & greases (mt)	1,377	1,264	1,100	105	531	459	—	35
Hides & skins incl. furskins	—	—	—	—	1,713	1,796	—	106
Cattle hides, whole (no.) 1/	26,280	24,777	—	1,681	1,360	1,365	—	99
Mink pelts (no.) 1/	3,073	5,128	—	139	91	116	—	4
Grains & feeds (mt)	114,709	112,911	—	8,048	16,830	15,997	3/ 12,500	1,043
Wheat (mt)	37,660	27,998	27,000	2,140	6,010	4,209	4/ 3,000	243
Wheat flour (mt)	1,176	882	1,000	110	255	203	—	21
Rice (mt)	3,041	2,497	2,400	145	955	830	800	52
Feed grains, incl. products (mt)	60,956	69,429	51,700	4,709	7,376	8,094	5,700	512
Feeds & fodders (mt)	11,086	11,134	5/ 11,400	811	1,849	1,827	—	143
Other grain products (mt)	790	971	—	133	385	534	—	72
Fruits, nuts, & preps. (mt)	2,555	2,873	—	232	2,394	2,789	—	268
Fruit juices incl.	—	—	—	—	—	—	—	—
froz. (1,000 hectoliters) 1/	4,998	5,975	—	603	265	328	—	31
Vegetables & preps. (mt)	1,666	2,242	—	189	1,542	2,079	—	201
Tobacco, unmanufactured (mt)	209	218	200	15	1,249	1,359	1,500	96
Cotton, excl. linters (mt)	1,441	1,666	1,800	46	2,040	2,704	3,000	80
Seeds (mt)	485	564	—	32	499	574	600	32
Sugar, cane or beet (mt)	388	447	—	45	134	187	—	16
Oilseeds & products (mt)	21,052	23,770	—	1,695	6,629	6,099	5,700	447
Oilseeds (mt)	14,592	17,696	—	1,169	4,363	4,245	—	279
Soybeans (mt)	14,093	17,221	15,200	1,110	4,085	3,940	3,500	247
Protein meal (mt)	4,963	4,772	—	357	1,358	1,024	—	71
Vegetable oils (mt)	1,498	1,302	—	188	908	830	—	97
Essential oils (mt)	13	14	—	1	171	182	—	13
Other	322	329	—	6	1,802	2,119	—	194
Total	145,676	147,831	129,000	10,551	39,611	40,203	37,500	2,926
IMPORTS								
Animals, live (no.) 1/	2,485	2,940	—	184	740	1,053	1,200	59
Meats & preps., excl. poultry (mt)	1,091	1,142	—	104	2,432	2,848	—	266
Beef & veal (mt)	668	754	800	72	1,525	1,842	1,800	184
Pork (mt)	371	340	340	27	778	888	900	71
Dairy products (mt) 1/	211	254	—	24	834	951	800	78
Poultry & products 1/	—	—	—	—	130	129	—	12
Fats, oils, & greases (mt)	14	19	—	3	14	15	—	2
Hides & skins, incl. furskins 1/	—	—	—	—	241	182	—	12
Wool, unmanufactured (mt)	62	47	—	6	319	187	—	18
Grains & feeds (mt)	3,467	3,471	3,800	384	1,139	1,181	1,200	108
Fruits, nuts, & preps., excl. juices (mt)	5,035	5,331	5,345	409	2,269	2,488	—	203
Bananas & plantains (mt)	3,039	3,236	3,275	275	851	926	1,000	82
Fruit juices (1,000 hectoliters) 1/	27,747	33,922	30,000	2,100	792	1,001	—	66
Vegetables & preps. (mt)	2,217	2,242	—	101	1,959	2,264	2,100	147
Tobacco, unmanufactured (mt)	171	193	220	20	521	588	600	65
Cotton, unmanufactured (mt)	13	30	—	1	8	20	—	1
Seeds (mt)	158	171	165	5	187	164	200	12
Nursery stock & cut flowers 1/	—	—	—	—	466	519	—	25
Sugar, cane or beet (mt)	1,657	1,769	—	139	620	734	—	57
Oilseeds & products (mt)	1,917	2,034	—	177	946	964	1,000	86
Oilseeds (mt)	424	534	—	41	159	206	—	18
Protein meal (mt)	359	310	—	41	65	48	—	5
Vegetable oils (mt)	1,133	1,189	—	96	721	710	—	64
Beverages excl. fruit juices (1,000 hectoliters) 1/	13,967	13,543	—	1,298	1,815	1,867	—	159
Coffee, tea, cocoa, spices	1,867	2,201	3,150	139	3,896	3,465	—	220
Coffee, incl. products (mt)	1,084	1,290	1,150	65	2,467	1,997	1,900	113
Cocoa beans & products (mt)	564	698	650	53	969	1,042	1,000	70
Rubber & allied gums (mt)	927	840	820	56	1,051	712	700	46
Other	—	—	—	—	1,097	1,231	—	116
Total	—	—	—	—	21,476	22,561	22,500	1,760

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1991 began Oct. 1, 1990 & ended Sept. 30, 1991. 1/ Not included in total volume and also other dairy products for 1989 & 1990. 2/ Forecasts for footnoted items 2/–6/ are based on slightly different groups of commodities. Fiscal 1990 exports of categories used in the 1991 forecasts were 2/ 676,000 m. tons. 3/ 16,014 million. 4/ 4,426 million l.e. includes flour. 5/ 11,065 million m. tons. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 28.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			July	Change from year* earlier			July
	1989	1990	1991 F	1991	1989	1990	1991 F	1991
	\$ million				Percent			
WESTERN EUROPE	7,049	7,318	7,100	429	-12	4	-3	33
European Community (EC-12)	6,539	6,825	6,600	394	-13	4	-3	34
Belgium-Luxembourg	431	431	—	49	0	0	—	130
France	474	469	—	39	-18	-1	—	80
Germany, Fed. Rep.	918	1,096	—	72	-28	19	—	147
Italy	609	704	—	31	-15	16	—	24
Netherlands	1,847	1,637	—	73	-12	-11	—	75
United Kingdom	736	761	—	61	-10	3	—	8
Portugal	307	336	—	14	-10	10	—	-57
Spain, Incl. Canary Islands	850	976	—	32	0	15	—	14
Other Western Europe	510	493	500	35	-2	-3	0	21
Switzerland	166	171	—	8	-14	3	—	23
EASTERN EUROPE	422	557	300	15	-25	32	-40	-51
German Dem. Rep.	72	58	—	0	7	-20	—	-100
Poland	45	101	—	3	-73	124	—	-77
Yugoslavia	76	129	—	1	-27	69	—	-68
Romania	62	234	—	10	-33	277	—	-34
USSR	3,299	3,000	1,900	120	70	-9	-37	30
ASIA	18,874	18,131	16,500	1,199	17	-3	-9	-14
West Asia (Mideast)	2,273	1,898	1,800	124	19	-12	-10	-5
Turkey	238	260	—	26	98	9	—	99
Iraq	791	497	0	0	8	-37	-100	-100
Israel, Incl. Gaza & W. Bank	331	285	—	34	-1	-14	—	91
Saudi Arabia	482	502	600	43	4	4	20	-5
South Asia	1,161	729	—	47	44	-37	—	-19
Bangladesh	213	125	—	1	99	-41	—	-23
India	243	115	—	15	-31	-53	—	7
Pakistan	599	391	100	13	117	-35	-75	-56
China	1,496	909	700	37	144	-39	-22	-54
Japan	8,148	8,106	7,800	539	12	-1	-4	-17
Southeast Asia	976	1,184	—	89	-4	21	—	11
Indonesia	216	277	—	11	-9	28	—	-32
Philippines	344	351	400	37	0	2	0	15
Other East Asia	4,620	5,207	4,700	363	7	13	-10	-8
Taiwan	1,594	1,818	1,700	130	1	14	-6	6
Korea, Rep.	2,453	2,703	2,200	174	9	10	-19	-20
Hong Kong	572	685	800	59	17	19	14	6
AFRICA	2,280	2,009	1,700	167	0	-12	-15	61
North Africa	1,798	1,524	1,300	114	8	-15	-13	135
Morocco	218	166	—	14	12	-23	—	23
Algeria	549	488	400	29	2	-11	-20	83
Egypt	955	761	600	62	22	-20	-25	299
Sub-Saharan	483	484	400	54	-21	0	0	-3
Nigeria	30	32	—	2	-32	7	—	-67
Rep. S. Africa	57	81	—	8	-33	43	—	-64
LATIN AMERICA & CARIBBEAN	5,440	5,157	5,400	575	24	-5	4	33
Brazil	149	105	300	34	-15	-30	200	204
Caribbean Islands	1,007	1,007	—	83	16	0	—	4
Central America	448	465	—	56	8	4	—	32
Colombia	139	147	—	11	-22	6	—	34
Mexico	2,757	2,666	2,800	317	60	-3	4	45
Peru	81	187	—	19	-53	132	—	98
Venezuela	587	345	400	32	-2	-41	33	-9
CANADA	2,179	3,715	4,300	390	10	70	16	7
OCEANIA	268	317	300	31	13	18	0	6
TOTAL	39,611	40,203	37,500	2,926	12	1	-8	6
Developed countries	17,971	19,766	19,800	1,425	1	10	0	2
Less developed countries	16,422	15,971	14,800	1,329	14	-3	-7	14
Centrally planned countries	5,217	4,466	2,900	172	68	-14	-34	-15

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1991 began Oct. 1, 1990 & ended Sept. 30, 1991. F = forecast. — = not available.
 Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 219-0822.

Farm Income

Table 29.—Farm Income Statistics

	Calendar year										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F
	\$ billion										
1. Farm receipts	144.1	147.2	141.3	147.1	149.4	140.2	148.3	157.3	168.6	175.8	172 to 179
Crops (incl. net CCC loans)	72.6	72.3	67.2	69.9	74.3	63.7	65.7	71.5	76.3	79.4	79 to 83
Livestock	69.2	70.3	69.6	72.9	69.8	71.5	76.0	79.5	84.2	89.7	85 to 89
Farm related 1/	2.5	4.6	4.5	4.3	5.3	5.0	6.6	6.3	8.1	6.7	6 to 8
2. Direct Government payments	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	10.9	9.3	8 to 9
Cash payments	1.9	3.5	4.1	4.0	7.6	8.1	6.6	7.1	9.1	8.4	7 to 8
Value of PIK commodities	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	1.7	0.9	0 to 1
3. Total gross farm income (4+5+6) 2/	166.3	163.5	153.2	170.2	162.9	156.5	168.3	174.4	189.7	194.4	188 to 193
4. Gross cash income (1+2)	146.0	150.6	150.8	155.5	157.2	152.0	164.9	171.8	179.5	185.1	181 to 186
5. Nonmoney income 3/	13.8	14.3	13.6	8.7	8.0	6.9	5.7	6.2	6.1	6.2	6 to 7
6. Value of inventory change	6.5	-1.4	-10.9	6.0	-2.3	-2.4	-2.3	-3.5	4.1	3.1	0 to 3
7. Cash expenses 4/	113.2	112.8	111.0	119.0	109.3	105.2	109.6	114.4	121.2	125.4	124 to 129
8. Total expenses	139.4	140.0	137.9	143.8	131.9	125.5	128.8	133.5	140.5	144.8	145 to 149
9. Net cash income (4-7)	32.8	37.9	39.8	36.6	47.9	46.7	55.3	57.4	58.3	59.7	54 to 59
10. Net farm income (3-8)	26.9	23.5	15.3	26.3	31.0	31.0	39.7	41.0	49.2	49.6	41 to 46
Deflated (1982\$)	28.0	23.6	14.7	24.5	27.9	27.3	33.8	33.8	39.0	37.7	31 to 34
11. Off-farm income	35.8	36.4	37.0	39.2	65.2	54.5	56.9	57.7	57.5	—	—
12. Loan charges 5/: Real estate	9.0	3.8	2.3	-2.0	-0.4	-8.7	-7.7	-4.1	-2.1	—	—
13. 5/: Non-real estate	6.5	3.4	0.9	-0.8	-9.6	-11.0	-4.6	-0.3	0.1	—	—
14. Rental income plus monetary change	6.4	6.4	5.4	9.2	9.1	8.0	6.8	7.5	8.2	—	—
15. Capital expenditures 5/	16.8	13.3	12.7	12.5	9.2	8.5	11.1	11.1	13.0	—	—
16. Net cash flow (9+12+13+14-15)	37.8	38.2	35.3	30.4	31.9	26.6	38.7	49.5	51.7	—	—

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Total may not add because of rounding. F = forecast. — = not available.

Information contact: Robert McElroy (202) 219-0800.

Table 30.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F
	\$ billion										
Assets											
Real estate	785.6	750.0	753.3	681.7	586.1	542.2	578.6	599.4	605.1	614.4	623 to 633
Non-real estate	196.8	195.6	191.9	196.9	187.4	182.3	194.2	205.8	214.7	220.9	218 to 228
Livestock & poultry	53.5	53.0	49.5	49.5	46.3	47.8	58.0	62.2	66.2	69.0	70 to 74
Machinery & motor vehicles	87.0	87.5	87.4	86.0	83.8	81.9	79.4	80.6	85.8	87.0	85 to 89
Crops stored 2/	29.0	26.1	24.0	26.2	22.9	16.0	17.8	22.7	23.3	22.4	21 to 24
Purchased inputs	—	—	—	2.6	1.3	2.0	3.3	3.4	2.8	3.0	2 to 4
Financial assets	27.3	29.0	30.9	32.6	33.1	34.5	35.4	36.6	38.5	38.0	36 to 40
Total farm assets	982.4	945.6	945.2	858.6	773.5	724.5	772.8	805.2	819.8	835.0	845 to 855
Liabilities											
Real estate debt 3/	98.7	101.8	103.2	106.7	100.1	90.4	82.4	77.6	75.3	74.4	73 to 77
Non-real estate debt 4/	83.6	87.0	87.9	87.1	77.5	66.8	62.0	61.7	61.8	65.3	63 to 67
Total farm debt	182.3	188.8	191.1	193.8	177.6	157.0	144.4	139.4	137.1	140.6	137 to 143
Total farm equity	800.0	750.0	754.1	664.8	595.9	567.6	628.4	665.9	682.7	695.3	705 to 715
	Percent										
Selected ratios											
Debt-to-assets	18.6	20.0	20.2	22.6	23.0	21.7	18.7	17.3	16.7	16.7	16 to 17
Debt-to-equity	22.8	24.9	25.3	29.2	29.8	27.7	23.0	20.9	20.1	20.1	19 to 21
Debt-to-net cash income	556	498	424	530	371	331	245	245	237	232	250 to 270

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 219-0798.

Table 31.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1989	1990	June 1991	July 1991	1989	1990	June 1991	July 1991	1989	1990	June 1991	July 1991
	\$ million 2/											
NORTH ATLANTIC												
Maine	218	220	17	17	228	240	2	13	444	460	19	30
New Hampshire	85	63	5	5	73	71	3	5	139	134	9	10
Vermont	379	398	29	29	50	49	2	7	429	447	31	36
Massachusetts	113	118	10	10	321	303	19	20	434	418	29	30
Rhode Island	13	13	1	1	65	58	3	3	78	71	4	4
Connecticut	186	198	14	18	240	250	12	16	426	446	26	31
New York	1,937	1,983	140	141	917	1,023	75	83	2,854	3,006	215	224
New Jersey	197	196	18	17	464	452	45	58	662	647	62	75
Pennsylvania	2,611	2,714	201	192	992	1,053	70	66	3,602	3,787	270	258
NORTH CENTRAL												
Ohio	1,698	1,836	122	128	2,088	2,335	94	217	3,787	4,172	216	345
Indiana	1,828	2,060	150	155	2,458	2,871	119	215	4,281	4,931	269	370
Illinois	2,251	2,477	189	191	4,727	5,461	267	295	6,979	7,938	455	486
Michigan	1,311	1,398	107	101	1,811	1,785	69	115	2,923	3,183	176	216
Wisconsin	4,350	4,581	330	346	1,050	1,125	85	95	5,400	5,706	416	441
Minnesota	3,893	3,758	278	273	2,820	3,253	236	202	6,513	7,011	513	475
Iowa	5,293	5,882	466	467	3,755	4,437	258	271	9,049	10,319	723	738
Missouri	2,169	2,271	183	184	1,751	1,868	97	114	3,920	3,939	279	278
North Dakota	669	813	32	32	1,483	1,724	101	81	2,152	2,537	132	113
South Dakota	2,031	2,313	183	113	951	1,036	46	69	2,982	3,349	229	182
Nebraska	5,646	6,037	402	406	3,080	2,808	129	134	8,726	8,845	531	540
Kansas	4,418	4,896	354	366	2,132	2,099	157	268	6,548	6,995	510	633
SOUTHERN												
Delaware	503	460	37	37	159	184	14	12	662	644	51	48
Maryland	859	828	66	63	477	517	31	47	1,336	1,345	97	109
Virginia	1,345	1,379	94	97	694	741	41	74	2,039	2,120	135	171
West Virginia	250	269	20	19	60	70	8	6	310	338	26	25
North Carolina	2,510	2,853	219	208	2,082	2,214	105	213	4,593	4,867	325	418
South Carolina	554	577	39	40	680	599	121	69	1,235	1,176	160	108
Georgia	2,281	2,268	178	175	1,626	1,574	102	108	3,908	3,842	278	280
Florida	1,215	1,260	90	100	5,031	4,448	422	192	6,246	5,708	612	294
Kentucky	1,858	1,698	90	308	1,266	1,400	36	35	2,924	3,098	127	344
Tennessee	1,082	1,111	83	72	863	928	45	33	1,946	2,039	128	106
Alabama	1,975	2,083	160	176	696	655	85	32	2,671	2,737	225	208
Mississippi	1,295	1,322	108	113	981	1,111	55	21	2,276	2,433	163	134
Arkansas	2,661	2,708	229	185	1,496	1,553	110	35	4,157	4,259	339	220
Louisiana	814	637	58	60	1,094	1,284	35	17	1,708	1,921	93	77
Oklahoma	2,377	2,363	179	229	1,137	1,191	164	160	3,515	3,554	343	379
Texas	6,861	7,712	678	592	4,063	4,268	275	306	10,923	11,981	953	898
WESTERN												
Montana	929	864	30	22	625	742	38	24	1,554	1,606	68	46
Idaho	1,084	1,154	74	81	1,662	1,781	74	67	2,745	2,935	148	148
Wyoming	664	610	18	24	163	157	4	5	827	787	22	29
Colorado	2,649	3,029	208	216	1,321	1,184	54	65	3,969	4,213	260	282
New Mexico	974	1,046	59	82	485	483	41	62	1,459	1,529	100	124
Arizona	744	819	71	64	1,182	1,046	73	52	1,926	1,865	144	116
Utah	567	576	37	50	188	179	8	13	755	755	45	63
Nevada	142	218	17	14	102	115	4	8	244	333	21	20
Washington	1,233	1,396	106	110	2,457	2,420	205	140	3,689	3,816	311	250
Oregon	738	755	54	64	1,546	1,557	84	134	2,285	2,312	138	198
California	5,193	5,515	465	407	12,857	13,344	935	992	18,050	18,859	1,401	1,399
Alaska	9	9	1	1	20	19	1	2	29	27	2	2
Hawaii	92	88	8	7	493	499	41	42	585	588	49	50
UNITED STATES	84,131	89,623	6,696	6,763	76,761	80,384	5,081	5,298	160,893	169,887	11,776	12,061

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 219-0806.

Table 32.—Cash Receipts From Farming

	Annual						1990	1991				
	1985	1986	1987	1988	1989	1990	July	Mar	Apr	May	June	July
	\$ million											
Farm marketings & CCC loans*	144,114	135,303	141,759	151,082	160,893	169,987	12,894	12,541	12,355	11,924	11,778	12,061
Livestock & products	69,822	71,553	75,994	79,437	84,131	89,623	7,207	7,188	6,915	6,875	6,696	6,763
Meat animals	38,550	39,081	44,478	46,492	48,857	51,677	3,787	4,227	4,130	3,911	3,802	3,658
Dairy products	16,065	17,724	17,727	17,641	19,396	20,199	1,765	1,490	1,480	1,567	1,465	1,518
Poultry & eggs	11,209	12,701	11,516	12,866	15,372	15,270	1,251	1,296	1,139	1,225	1,245	1,207
Other	2,008	2,048	2,274	2,438	2,507	2,477	384	176	166	171	184	383
Crops	74,293	63,749	65,764	71,645	78,761	80,364	5,686	5,352	5,440	5,049	5,081	5,298
Food grains	8,990	5,741	5,776	7,467	8,247	7,876	1,338	302	291	304	308	1,152
Feed crops	22,591	18,811	14,576	14,298	17,061	19,116	1,216	1,356	1,308	1,092	1,144	1,035
Cotton (lint & seed)	3,887	3,371	4,189	4,546	5,040	5,234	62	252	204	150	103	76
Tobacco	2,699	1,894	1,816	2,083	2,415	2,736	123	1	16	0	0	259
Oil-bearing crops	12,475	10,614	11,283	13,500	11,866	12,403	454	846	652	518	375	381
Vegetables & melons	8,572	8,865	9,902	9,787	11,461	11,533	661	1,142	1,291	1,665	1,285	830
Fruits & tree nuts	6,946	7,252	8,062	9,204	9,257	9,306	875	466	424	366	616	848
Other	8,333	9,101	10,161	10,760	11,415	12,160	736	988	1,253	953	653	711
Government payments	7,704	11,813	16,747	14,480	10,887	9,298	52	1,745	1,238	1,054	213	73
Total	151,818	147,116	158,506	165,562	171,780	179,285	12,946	14,286	13,593	12,978	11,989	12,134

*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 219-0806.

Table 33.—Farm Production Expenses

	Calendar year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F
	\$ million									
Feed purchased	18,592	20,573	19,383	16,949	17,472	17,463	20,393	21,002	20,727	20,000 to 22,000
Livestock purchased	9,684	8,816	9,487	9,184	9,758	11,842	12,764	13,138	14,737	13,000 to 15,000
Seed purchased	3,172	2,690	3,386	3,128	3,188	3,259	3,359	3,558	3,582	3,000 to 5,000
Farm-origin inputs	31,447	32,081	32,256	29,261	30,418	32,564	36,515	37,698	39,046	37,000 to 40,000
Fertilizer & lime	8,016	7,055	6,360	7,512	6,820	6,453	6,947	7,249	7,137	7,000 to 8,000
Fuels & oils	7,734	7,211	7,296	6,436	5,310	4,957	5,091	4,983	5,951	5,000 to 7,000
Electricity	2,041	1,982	2,060	1,878	1,795	2,156	2,278	1,990	1,944	1,000 to 3,000
Pesticides	4,282	3,870	4,686	4,334	4,324	4,512	4,577	5,437	5,727	5,000 to 7,000
Manufactured inputs	22,076	20,116	22,404	20,159	16,249	18,077	18,893	19,659	20,759	20,000 to 22,000
Short-term interest	11,349	10,615	10,396	8,735	7,367	6,767	6,797	6,910	6,605	7,000 to 9,000
Real estate interest 1/	10,481	10,815	10,733	9,876	9,131	8,167	7,885	7,761	7,667	6,000 to 8,000
Total interest charges	21,830	21,430	21,129	18,613	16,498	14,954	14,682	14,691	14,472	14,000 to 16,000
Repair & maintenance 1/ 2/	6,426	6,529	6,416	6,370	6,426	6,761	8,800	7,272	7,283	7,000 to 9,000
Contract & hired labor	9,306	8,836	9,201	9,949	9,466	9,981	10,441	11,211	12,662	13,000 to 15,000
Machine hire & custom work	2,025	2,213	2,566	2,354	2,099	2,105	2,350	2,674	2,634	2,000 to 4,000
Marketing, storage, & transportation	4,301	3,904	4,012	4,127	3,852	4,076	3,450	4,080	3,972	3,000 to 5,000
Misc. operating expenses 1/	9,145	10,961	10,331	10,010	9,759	11,327	11,404	12,446	12,236	10,000 to 12,000
Other operating expenses	31,204	33,442	32,525	32,809	31,402	34,252	34,445	37,582	38,669	39,000 to 43,000
Capital consumption 1/	24,189	23,758	20,847	19,299	17,788	16,740	17,075	17,553	17,545	16,000 to 19,000
Taxes 1/	4,010	4,465	4,337	4,542	4,612	4,653	4,848	5,127	5,623	5,000 to 6,000
Net rent to nonoperator landlord	5,476	5,211	8,150	7,690	6,099	7,304	7,445	7,911	8,177	8,000 to 9,000
Other overhead expenses	33,875	33,434	33,334	31,531	28,499	28,897	29,367	30,590	31,345	30,000 to 33,000
Total production expenses	140,232	139,506	141,647	132,374	125,067	128,742	133,902	140,219	144,291	145,000 to 150,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 219-0804, Robert McElroy (202) 219-0800.

Table 34.—CCC Net Outlays by Commodity & Function

COMMODITY/PROGRAM	Fiscal year									
	1983	1984	1985	1986	1987	1988	1989	1990	1991 E	1992 E
	\$ million									
COMMODITY/PROGRAM										
Feed grains										
Corn	5,720	-934	4,403	10,524	12,346	8,227	2,863	2,450	2,411	3,811
Grain sorghum	814	76	463	1,185	1,203	764	467	361	281	315
Barley	268	89	336	471	394	57	45	-93	62	148
Oats	11	5	2	26	17	-2	1	-5	14	26
Corn & oat products	2	6	7	5	7	7	8	8	7	8
Total feed grains	6,815	-758	5,211	12,211	13,967	9,053	3,384	2,721	2,755	4,308
Wheat	3,419	2,536	4,661	3,440	2,836	678	53	808	2,817	1,863
Rice	664	333	990	947	906	128	631	687	758	698
Upland cotton	1,363	244	1,553	2,142	1,786	666	1,461	-79	392	431
Tobacco	880	346	455	253	-346	-453	-367	-307	-237	-79
Dairy	2,528	1,502	2,085	2,337	1,166	1,295	679	505	783	419
Soybeans	268	-585	711	1,597	-476	-1,676	-86	5	102	20
Peanuts	-6	1	12	32	8	7	13	1	-4	-3
Sugar	49	10	184	214	-85	-246	-25	15	-2	-27
Honey	48	90	81	89	73	100	42	47	23	18
Wool	94	132	109	123	152	1/ 5	93	104	173	198
Operating expense 3/	328	362	346	457	535	614	620	618	634	724
Interest expenditure	3,525	1,064	1,435	1,411	1,219	425	98	632	757	573
Export programs 4/	398	743	134	102	276	200	-102	-34	567	1,322
1988/89 Disaster/										
Livestock Assistance	0	0	0	0	0	0	3,919	2/ 161	146	2
Other	-1,542	1,295	-314	486	371	1,665	110	609	905	1,446
Total	18,851	7,315	17,683	25,841	22,408	12,461	10,523	6,471	10,569	11,913
FUNCTION										
Price-support loans (net)	8,438	-27	6,272	13,628	12,199	4,579	-926	-399	267	434
Direct payments 5/										
Deficiency	2,780	612	6,302	6,166	4,833	3,971	5,798	4,178	6,203	6,695
Diversion	705	1,504	1,525	64	382	8	-1	0	0	0
Dairy termination	0	0	0	489	587	260	188	189	97	1
Other	0	0	0	27	60	0	42	3	14	16
Disaster	115	1	0	0	0	6	4	0	0	0
Total direct payments	3,600	2,117	7,827	6,746	5,862	4,245	6,011	4,370	6,314	6,712
1988/89 crop disaster	0	0	0	0	0	0	3,386	2/ 5	8	0
Emergency livestock/										
forage assistance	0	0	0	0	0	31	533	156	138	2
Purchases (net)	2,540	1,470	1,331	1,670	-479	-1,131	116	-48	594	534
Producer storage										
payments	964	268	329	485	832	658	174	185	1	26
Processing, storage,										
& transportation	665	639	657	1,013	1,659	1,113	659	317	299	213
Operating expense 3/	328	362	346	457	535	614	620	618	634	724
Interest expenditure	3,525	1,064	1,435	1,411	1,219	425	98	632	757	573
Export programs 4/	398	743	134	102	276	200	-102	-34	567	1,322
Other	-1,607	679	-648	329	305	1,727	-46	669	990	1,373
Total	18,851	7,315	17,683	25,841	22,408	12,461	10,523	6,471	10,569	11,913

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Approximately \$1.5 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates & were not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Export Guarantee Program-Credit Reform, Direct Export Credit Program, Market Promotion Program, & CCC Transfers to the General Sales Manager. 5/ Includes cash payments only. Excludes payment-in-kind in fiscal 83-85 & generic certificates in fiscal 86-90. E = Estimated in the fiscal 1992 Mid-Session Review based on June, 1991 supply & demand estimates. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 447-5148.

Food Expenditures

Table 35.—Food Expenditure Estimate:

	Annual			1991			1991 year-to-date		
	1988	1989	1990	July P	Aug P	Sept P	July	Aug P	Sept P
\$ billion									
Sales 1/									
Off-premise use 2/	255.7	272.1	286.3	25.3	25.7	23.4	169.1	194.7	218.1
Meals & snacks 3/	196.5	205.9	220.3	20.3	21.2	19.1	131.8	153.1	172.2
1990 \$ billion									
Sales 1/									
Off-premise use 2/	290.2	289.5	286.2	24.6	25.2	23.0	163.9	189.0	212.0
Meals & snacks 3/	215.2	215.6	220.2	19.6	20.4	18.4	128.3	148.7	167.1
Percent change from year earlier (\$ bil.)									
Sales 1/									
Off-premise use 2/	4.8	6.4	5.2	3.7	2.7	-1.3	3.1	3.1	2.6
Meals & snacks 3/	8.7	4.8	7.0	3.4	5.2	4.1	3.7	3.9	3.9
Percent change from year earlier (1990 \$ bil.)									
Sales 1/									
Off-premise use 2/	0.6	-0.2	-1.1	1.0	1.0	-2.8	-0.6	-0.4	-0.6
Meals & snacks 3/	4.4	0.2	2.1	0.0	1.9	0.8	0.1	0.3	0.4

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food not alcoholic beverages & pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug 1987.

Information contact: Alden Manchester (202) 219-0880.

Transportation

Table 36.—Rail Rates, Grain & Fruit-Vegetable Shipments

	Annual			1990	1991					
	1988	1989	1990	Aug	Mar	Apr	May	June	July	Aug
Rail freight rate index 1/ (Dec. 1984=100)										
All products	104.8	106.4	107.5	107.3	109.5	109.6	109.4 P	109.5 P	109.5 P	109.4 P
Farm products	105.6	108.4	110.4	110.5	112.8	112.4	111.7 P	111.6 P	113.1 P	112.6 P
Grain	105.4	108.7	110.1	110.5	112.5	112.0	111.1 P	111.2 P	112.9 P	112.2 P
Food products	103.2	103.9	105.4	104.4	108.3	108.3	108.1 P	108.2 P	108.2 P	107.3 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	30.7	28.4	27.6	26.9	28.1 P	24.9 P	20.8 P	24.5 P	25.6 P	27.6 P
Barge shipments (mil. ton) 3/	3.2	3.3	3.8	4.0	3.1	4.0	3.7	3.6	4.4	4.2
Fresh fruit & vegetable shipments 4/ 5/										
Piggy back (mil. cwt)	28.0	26.3	22.1	1.5	1.2	1.1	1.6	2.2	2.0	1.7
Rail (1,000 cwt)	31.6	31.0	27.5	0.8	1.8	1.4	2.6	3.1	1.9	0.7
Truck (1,000 cwt)	569.4	567.5	497.7	39.8	40.5	42.5	48.0	45.7	45.9	40.9
Cost of operating trucks hauling produce 4/										
Fleet operation (cts./mile)	118.4	123.4	130.5	133.5	128.5	126.1	127.6	124.6	124.7	122.6

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Shipments on Illinois & Mississippi waterways. U.S. Corps of Engineers. 4/ Agricultural Marketing Service, USDA. 5/ Preliminary data for 1990 & 1991. P = preliminary.

Information contact: T.O. Hutchinson (202) 219-0840.

Indicators of Farm Productivity

Table 37.—Indexes of Farm Production, Input Use & Productivity ^{1/}

	1982	1983	1984	1985	1986	1987	1988	1989	1990 2/	1991 2/
	1977=100									
Farm output	116	96	112	118	111	110	102	114	117	120
All livestock products 3/	107	109	107	110	110	113	116	116	117	119
Meat animals	101	104	101	102	100	102	105	104	101	104
Dairy products	110	114	110	117	116	116	118	117	120	121
Poultry & eggs	119	120	123	128	133	144	148	153	165	168
All crops 4/	117	88	111	118	109	108	92	107	113	114
Feed grains	122	87	116	134	123	106	73	108	112	106
Hay & forage	109	100	107	106	106	102	89	101	101	108
Food grains	138	117	129	121	107	107	98	107	136	105
Sugar crops	96	93	95	97	106	111	105	105	108	113
Cotton	85	55	91	94	69	103	107	86	108	123
Tobacco	104	75	90	81	63	62	72	71	85	86
Oil crops	121	91	108	117	110	108	89	108	107	111
Cropland used for crops	101	88	99	98	94	88	87	90	90	--
Crop production per acre	116	100	112	120	116	123	106	119	126	--
Farm input 5/	99	96	98	92	89	89	87	88	--	--
Farm real estate	102	101	99	97	96	95	94	93	--	--
Mechanical power & machinery	92	89	86	80	77	73	72	73	--	--
Agricultural chemicals	118	102	120	115	109	111	111	122	--	--
Feed, seed, & livestock purchases	107	103	106	102	110	117	110	119	--	--
Farm output per unit of input	117	99	117	128	124	124	117	128	--	--
Output per hour of labor										
Farm 6/	125	99	121	139	139	142	134	148	--	--
Nonfarm 7/	99	102	105	106	108	109	111	112	--	--

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1988, ECIFS 5-6. 2/ Preliminary indexes for 1990 based on Crop Production: 1990 Summary, released in January 1991, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. -- = not available.

Information contact: George Douvelis (202) 219-0432.

Food Supply & Use

Table 38.—Per Capita Consumption of Major Food Commodities ^{1/}

Commodity	1983	1984	1985	1986	1987	1988	1989	1990 2/
Pounds								
Red meats 3/4/5	123.9	123.6	124.9	122.2	117.4	119.5	115.9	112.3
Beef	74.1	73.8	74.6	74.4	69.5	68.6	65.4	64.0
Veal	1.3	1.5	1.5	1.6	1.3	1.1	1.0	0.9
Lamb & mutton	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.1
Pork	47.4	47.2	47.7	45.2	45.6	48.8	48.4	46.3
Poultry 3/4/5	45.8	47.2	49.4	51.3	55.5	57.4	60.8	63.8
Chicken	37.0	38.2	39.9	40.7	43.4	44.7	47.3	49.4
Turkey	8.9	9.0	9.6	10.6	12.1	12.6	13.5	14.5
Fish & shellfish 4/	13.3	14.1	15.0	15.4	16.1	15.2	15.6	15.4
Eggs 5/	33.0	33.0	32.4	32.2	32.2	31.2	29.9	29.6
Dairy products								
Cheese (excluding cottage) 3/6/	20.6	21.5	22.5	23.1	24.1	23.7	23.9	24.7
American	11.6	11.9	12.2	12.1	12.4	11.5	11.1	11.1
Italian	5.3	5.8	6.5	7.0	7.6	8.1	8.5	9.1
Other cheese 7/	3.7	3.9	3.7	4.0	4.1	4.1	4.3	4.4
Cottage cheese	4.1	4.1	4.1	4.1	3.9	3.9	3.6	3.4
Beverage milks 3/	226.5	227.3	229.7	228.6	226.5	222.3	224.3	221.5
Fluid whole milk 8/	130.3	126.9	123.4	116.5	111.9	105.7	97.6	90.3
Fluid lowfat milk 9/	85.6	88.9	93.7	98.7	100.6	100.5	106.5	108.3
Fluid skim milk	10.6	11.6	12.6	13.5	14.0	16.1	20.2	22.9
Fluid cream products 10/	5.8	6.2	6.7	7.1	7.1	7.1	7.3	7.1
Yogurt (excluding frozen)	3.3	3.7	4.1	4.4	4.4	4.7	4.3	4.1
Ice cream	18.1	18.2	18.1	18.4	18.4	17.3	16.1	15.7
Ice milk	6.9	7.0	6.9	7.2	7.4	8.0	8.4	8.7
All dairy products, milk equivalent, milkfat basis 11/	574.2	583.3	595.1	592.8	602.6	584.5	566.5	571.8
Fats & oils — Total fat content	60.0	58.9	64.3	64.3	62.9	63.0	61.1	62.7
Butter & margarine (product weight)	15.3	15.3	15.7	16.0	15.2	14.8	14.6	15.3
Shortening	18.5	21.3	22.9	22.1	21.4	21.5	21.5	22.2
Lard & edible tallow (direct use)	4.2	3.8	3.7	3.5	2.7	2.6	2.7	3.0
Salad & cooking oils	23.6	19.9	23.5	24.2	25.4	25.8	24.0	24.2
Fresh fruits 12/	93.0	91.7	89.3	85.8	101.2	99.1	99.7	92.2
Canned fruit 13/	12.8	12.3	12.7	12.9	13.6	13.2	13.4	13.5
Dried fruit	2.4	2.4	2.7	2.7	2.6	2.9	3.1	3.1
Frozen fruit	2.9	3.0	3.3	3.6	3.9	3.8	4.6	4.3
Frozen citrus juices 14/	41.7	35.6	40.5	43.3	40.2	40.1	34.3	27.2
Vegetables 12/								
Fresh	82.5	89.6	90.5	90.9	95.4	98.7	101.0	95.2
Canning	79.5	90.7	87.5	87.7	87.1	83.1	90.5	92.7
Freezing	14.4	17.4	17.0	15.8	16.8	17.9	16.9	18.0
Potatoes, all 12/	118.1	122.1	122.4	125.7	125.9	123.2	126.2	126.8
Sweetpotatoes 12/	4.6	5.0	5.4	4.4	4.5	4.1	4.1	4.7
Peanuts (shelled)	5.9	6.1	6.3	6.4	6.4	6.9	7.0	6.2
Tree nuts (shelled)	2.3	2.4	2.4	2.3	2.2	2.3	2.3	2.5
Flour & cereal products 15/	149.0	150.6	158.0	163.9	173.4	172.9	175.0	185.4
Wheat flour	117.7	119.2	124.7	125.7	129.9	130.0	129.2	137.8
Rice (milled basis)	9.8	8.6	9.1	11.7	13.9	14.4	15.6	16.6
Caloric sweeteners 16/	124.3	127.0	130.0	129.1	132.6	133.2	134.3	137.5
Coffee (green bean equiv.)	10.1	10.2	10.5	10.5	10.2	9.8	10.3	10.2
Cocoa (chocolate liquor equiv.)	3.2	3.4	3.7	3.8	3.9	3.8	3.9	4.2

1/ In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, & ending stocks. Calendar-year data except fresh citrus fruits, peanuts, tree nuts, & rice, which are on crop-year basis. 2/ Preliminary. 3/ Total may not add due to rounding. 4/ Boneless, trimmed weight. 5/ Excludes shipments to the U.S. territories. 6/ Natural equivalent of cheese & cheese products. Total product weight is greater than natural equivalent because processed cheese & cheese food are made from natural cheese & other dairy products. Includes miscellaneous cheese not shown separately. 7/ Includes Swiss, Brick, Munster, cream, Neufchatel, Blue, Gorgonzola, Edam, & Gouda. 8/ Plain & flavored. 9/ Plain & flavored & buttermilk. 10/ Heavy cream, light cream, half & half, & sour cream & dip. 11/ Includes condensed & evaporated milk & dry milk products. 12/ Farm weight. 13/ Excludes pineapple & berries. 14/ Single strength equivalent. 15/ Includes rye, corn, oat, & barley products. Excludes quantities used in alcoholic beverages & fuel. 16/ Dry weight equivalent.

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